NEW CARS: CORVAIR SS AND OLDS CUTLASS!

IND

MOTOR TREND

JULY 1961 35c

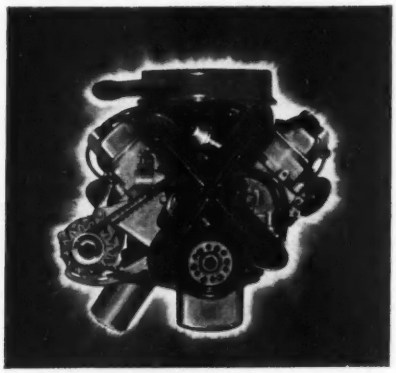
BUYER'S GUIDE 1961 CARS

ROAD TEST FACTS OPTIONS
HIGH-PERFORMANCE & ECONOMY CARS
SPECIFICATIONS PRICES

OLDSMOBILE *Announces...*

F-85 Cutlass

with the exhilarating new
ROCKETTE 185 Engine!



Sports-car dash! High-performance, all-new aluminum Rockette V-8 Engine delivers 185 h.p. and 230 lb.-ft. of torque! It features 10.25-to-1 compression ratio, a new high-capacity manifold to improve engine breathing, four-barrel carburetion and dual outlet exhausts to increase top-range responsiveness. High-torque Cutlass rear axle with 3.36-to-1 ratio makes the most of Rockette power. All *standard* equipment, of course!

Above: F-85 Cutlass Sports Coupe. Also available: new F-85 Club Coupe . . . lowest-priced Oldsmobile of all!

IT'S THE WORLD'S SMARTEST SPORTS COUPE!

Sports-car dazzle! Wide-opening doors—padded and covered with richly-pleated Morocceen—invite you inside. Up front, foam-cushioned bucket seats . . . *standard at no extra cost* . . . combine contoured comfort with distinctive, sports-car styling! In the rear, a full deluxe-cushioned seat adds plenty of room for the entire family.

In a class by itself! Oldsmobile announces an advanced model—styled and powered to be the sportiest of the smaller cars! Slide inside this fiery new glamour coupe and see how its 185-h.p. aluminum Rockette V-8 powers you into action . . . with four-barrel carburetion, dual outlet exhausts, and high-torque rear axle! Lean back in comfortable bucket seats . . . enjoy a thrilling new sense of command in the tight-turning, easy-handling F-85 Cutlass Sports Coupe! *You* can be among the *first* to try this new, action-packed F-85 Cutlass at your Oldsmobile Quality Dealer's!

OLDSMOBILE DIVISION, GENERAL MOTORS CORPORATION

Every inch an

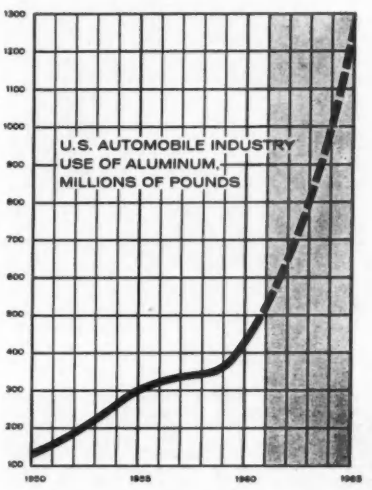
OLDSMOBILE

Survey shows: People who know cars know aluminum, prefer aluminum

When you car enthusiasts speak, Detroit listens. And, as you probably know, your ideas, your opinions, and your preferences have a great influence on American car design.

That's why ears are perking up all over Detroit with the announcement of a recent survey among the readers of MOTOR TREND, MOTOR LIFE, and HOT ROD magazines. The results of that survey are most gratifying to the designers and builders of our automobiles. As far as you car experts are concerned, Detroit is definitely on the right track—with aluminum.

Every automobile owner knows that for the past 15 years or so, more and more aluminum has gone into the new cars. Each year's models show more aluminum in more parts, and automotive experts predict the trend will grow at an even more rapid rate. Here's what this trend looks like:



Watch Reynolds TV show
"Harrigan & Son", Fridays—ABC-TV

Aluminum Preferred

So, with such a trend and outlook, it's not surprising that you car "critics" would be asked for your opinions on aluminum—as it stacks up against other metals for various components. In the survey just completed, close to 1,000 subscribers to automotive magazines stated their preference for materials in various parts: grilles, engines, and wheels.

Aluminum was the preferred material for these parts, by a wide margin.

Here are the facts:

Among the readers of HOT ROD magazine,
- 69.9% preferred aluminum for grilles
- 73.4% preferred aluminum for engines
- 53.5% preferred aluminum for wheels

Among the readers of MOTOR TREND,
- 69.1% preferred aluminum for grilles
- 63.9% preferred aluminum for engines
- 43.4% preferred aluminum for wheels

Among the readers of MOTOR LIFE,
- 66.1% preferred aluminum for grilles
- 68.4% preferred aluminum for engines
- 50.3% preferred aluminum for wheels

Aluminum's Advantages Are No Secret

The survey revealed, too, that car enthusiasts not only know what they want in automotive engineering, they know *why*. For instance, almost all of those who preferred aluminum for grilles said they did so because of aluminum's light weight and nonrusting properties.

They liked aluminum for engines because it shaves dead weight, because it cools faster and more evenly, and because it offers better horsepower-to-weight ratio.

And their reasons for preferring aluminum for wheels: light weight, better cooling for brake drums, and strength.

Naturally, Reynolds Metals Company is pleased with the results of this study, but we feel that the automotive industry—and you automotive critics, as well—should be gratified, too.

This study shows what your preferences are; Detroit's trend toward more aluminum shows your preferences are being listened to. This means you can look forward to more quality, more lasting value, better performance in the cars you buy.

Reynolds is proud of its role as the leading developer and supplier of aluminum for automobiles. *Reynolds Metals Company, P. O. Box 2346-MP, Richmond 18, Va.*

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Motor Trend

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If you don't know tires, know your tire dealer. Armstrong dealers back their tires with a guarantee that never expires!

Get the life-saving protection of Safety Discs —and the guarantee that never expires

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AS LOW AS **$10.95** (6.70x15) plus tax and your recappable tire

ARMSTRONG RUBBER COMPANY Home Office, West Haven, Connecticut

By Don Werner

EDITOR'S REPORT

WHILE THE BUYER'S GUIDE in this issue is based on the conclusions formed during testing of all the 1961 makes of domestic cars, it is not the end of our road work on the current models.

In the next month's issue, for instance, the MT staff returns to the Ford and Chevrolet with another road test report, this one involving a direct comparison that covers both the Sixes and the V-8's. The same issue also will carry a complete analysis of the standard station wagon class.

Other early test reports will be a group analysis of the new bus-type Corvair Greenbrier and Falcon Econoline together with the VW bus that pioneered this category, reports on several of the new versions of the compacts and, of course, coverage of the Corvette, as well as some of the new light pickups.

In coverage of cars, MT draws no line between domestics or imports. Where a car is made is really incidental, and the general policy is to view them all as our "common" buyers market. From the announcement patterns followed by the car makers themselves, however, certain seasons occur in MT. Right now, for instance, as road testing of the current domestic models goes into its final stages, the coverage of imports increases. Coming up are road test reports on Mercedes, Jaguar, Volvo, Austin-Healey and several others.

The next couple of issues of MT, as has become traditional for this time of year, will line up on one of the major annual topics — what's ahead in cars. There is more to be reported on this subject than ever before. Detroit, quite literally, is in the agony of adjustment — a complete and total realignment of its car designing. The past year was a big one for all-new cars and a flock of hybrids. Next year will be even bigger. And the year after that and the year after that. There will be more new engines, more new sizes of cars, more new ideas in the next three years than there have been in the past 16. And that is a conservative estimate. There will be a big start on the preview next month.

An unusual item of news has come from the Tidewater Oil Company. It plans to offer at its Flying A service stations a coin-machine system of travel insurance for motorists. The coverage will be $7500 for one week for $1. The plan is similar to the kind available at airline terminals.

This sounds like a pretty good idea and one that other oil companies may very well pick up and use. But it also no doubt will remind many drivers who have heard the Shelley Berman record album of the "coffee, tea or milk?" routine he does on air travel. Berman feels, when walking into an airline terminal and seeing all the insurance sold, that "someone thinks you're not going to get there."

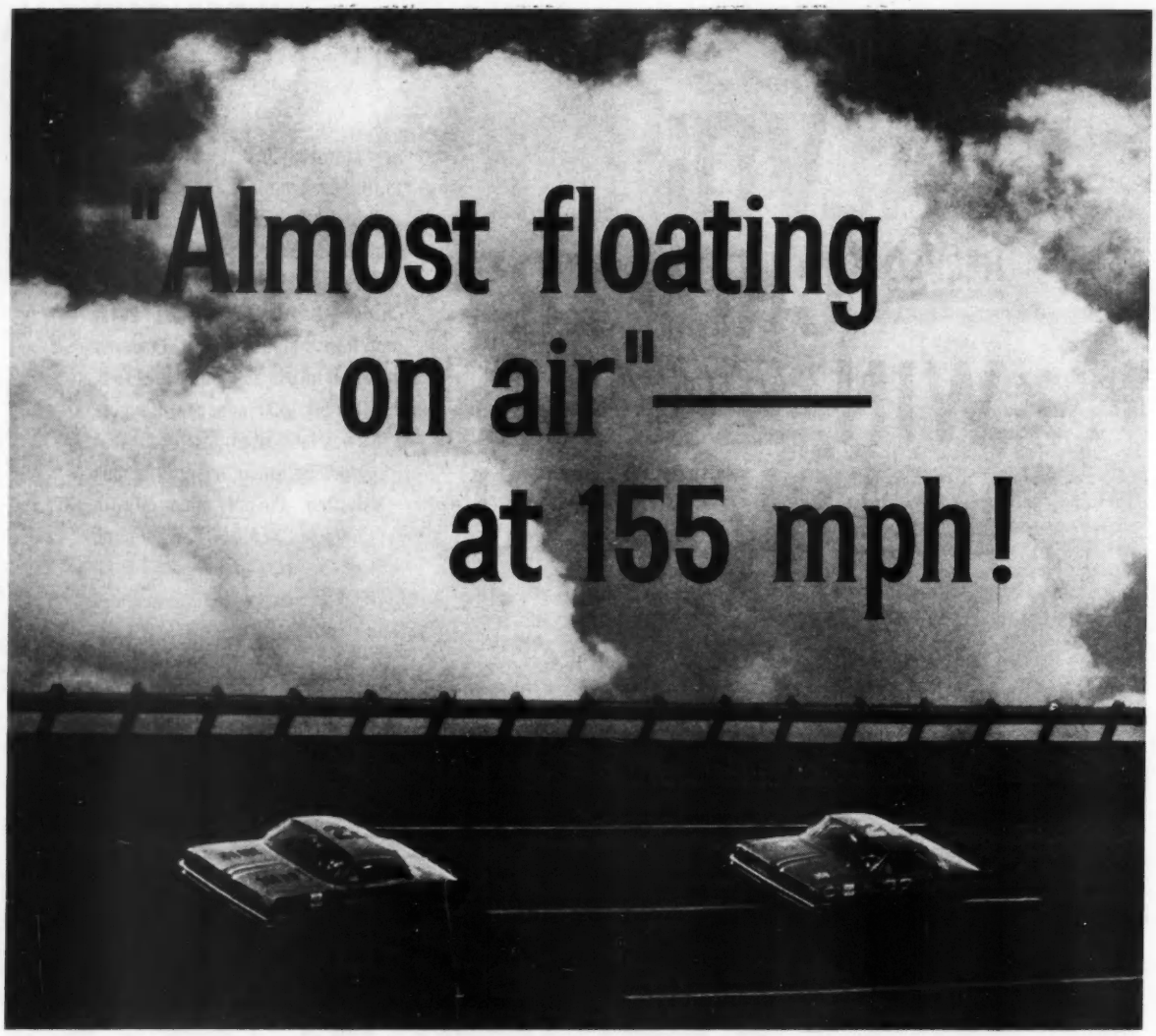
The sudden rush by car makers to offer bucket seats in special versions of their cars, particularly the compacts, has prompted a number of MT readers to ask about the real merits of such seats. In the first place, nearly all of the new seats are not really buckets, but are actually the semi-bucket type. The true bucket seat, as found in sports cars, does offer a high degree of comfort and seating stability. To some extent, the same advantages will be found in the semi-buckets of the compacts. But in the main the bucket seats can be put down along with tail fins, phony wire wheels, continental tire kits and other similar items as devices that may have some functional value but are largely popular as extensions of car styling. The bucket seats, as was said, have some advantages, but they also have their limitations, and for many drivers a bench seat may be the best answer. In all probability, the bucket seat business, except for a few cars like the Corvair Monza and the Thunderbird, will gradually fade away. /MT

VALVOLINE HELPED "CHIZLER" WIN 204.5 M.P.H. SIZZLER!

On April 12, 1960—a hushed crowd of 4000 spectators at the Alton, Illinois Dragways suddenly burst into an ear-splitting roar as Chris Karamesines snapped the 195 mph world speed record by guiding his "Chizler" dragster to a finish of 204.5 mph from a standing start! Powered with a fuel mix of 85% nitro and 15% alcohol, his big 1000 horsepower engine was lubricated throughout that gruelling run with world-famous Valvoline—the only motor oil with miracle CHEMALOY. Where one engine miss could have lost the record for Chris Karamesines . . . Valvoline with CHEMALOY helped keep that burning-hot, 1000 horsepower engine going at peak performance safely, flawlessly! Whether for quick cold-engine starts or fast hot-engine driving—start getting champion performance from your engine with the motor oil of the champions: Valvoline with miracle CHEMALOY . . . ask for it at better service stations, garages and speed shops!

World's First . . . World's Finest MOTOR OIL
VALVOLINE OIL COMPANY
FREEDOM, PA.,
Division of Ashland Oil & Refining Company

"Almost floating on air"—— at 155 mph!



Fireball Roberts, leading Junior Johnson, roars to victory in the first 100-mile Grand National race. Roberts and Johnson (last year's Daytona "500" winner), both ran on Champion spark plugs.

Quick pit work is a must in a long race. Here Bob Welborn's crew gives him a fast fueling and tire inspection during the big "500."

Joe Weatherly set a new record of 152.671 mph (Champion-sparked) to win the second 100-mile Grand National. Microphone is for 2-way radio communication with pit crew.

That's how it feels to drive a big stocker flat-out at Daytona, according to one top driver. Here are some highlights and insights on Daytona Speed Weeks . . . an event that saw Champion-sparked cars sweep every late-model stock car race . . .

In the garage area, Champion Racing Engineers Dick Jones and Art Lamey check plugs on Banjo Matthew's Ford. Banjo led early in the "500," and was running a hot second near the finish when another car collided with his, forcing him out of the race moments before leader Fireball Roberts went out.

"When you're running 155 mph, you're almost floating on air. The controls are real sensitive. Just *suggest* turning the wheel—and you go that way. Or maybe the car gets up in the air a little bit and won't turn at all. You always make a move without knowing exactly *what* is going to happen." That's what it's like to drive the Daytona Speedway, world's fastest track—according to Fireball Roberts, who set a new 10-mile qualification record of 155.709 mph. (He drove his Champion-sparked Pontiac flat-out even through the turns on that run.)

And what's it like in the garage area, in those all-important preparation days? One thing you notice is noise—the common denominator of all auto racing. The sounds of speed and power . . . the rough machine-gun idle of high-speed cams . . . the lionlike roar of a suddenly accelerated engine . . . and the angry growl of unmuffled mills, rising and falling as cars speed around the track.

Amid the noise is concentration. Highly skilled mechanics carefully study the results of every tiny adjustment . . . consulting with Champion racing engineers to read the reports "written" on the business ends of their Champion spark plugs. (A plug check tells a trained eye many things about engine performance.) And Champion spark plugs are unexcelled as *producers* of power, too. Daytona proved it again. Champion-sparked cars finished 1-2-3 in every Grand National race for late-model stock cars.

Marvin Panch and ace mechanic Smokey Yunick (in his traditional black hat) plan strategy while waiting to line up for race. Panch drove his Champion-sparked stocker to a new world's record for continuous 500-mile races, averaging 149.601 mph to win the Daytona "500."

Champion Racing Engineer Bradley Dennis (left) helps Nelson Stacy check plugs on his Ford. Stacy was 1960 MARC stock car champion.

Letters

BEST MILEAGE REFERENCE

The Mobilgas Economy Run is of little value to the consumer, because no average driver drives like the Run drivers.

If I am interested in the best gas mileage obtainable from a particular automobile, I would rather refer to MOTOR TREND's road tests.

I recall one of your tests in particular. You road tested a 1955 Oldsmobile Super 88, and aside from pointing out that the 0-60 speed was 10.6 seconds (which was about tops for that year), your test indicated your best gas mileage as 24 mpg.

On the basis of your test of the 1955 Oldsmobile, I went out and bought one. I am not a professional driver, but I took the car out on a 180-mile stretch of highway and drove that distance carefully, keeping economy in mind, in order to see what gas mileage I could get. I got an average of 22.4 mpg — which was pretty good for me, and pretty close to your figure.

Raymond Olsen Greenwood Lake, N.Y.

PREFER "SLOPPY" FLOOR MATS

I disagree with the complaint made in your Falcon road test (May MT) about the "sloppy" rubber floor mat, "typical of lower-priced Ford products."

In some parts of the country we are not completely hard surfaced yet, especially in the Midwest farm country. Sometimes when we enter our vehicles, our feet are muddy. Under these conditions your GM hair mats fall flat.

Frankly, I would pay extra to get those "sloppy" rubber mats.

William Wright Adel, Iowa

PICKUP TESTS

Why not test the new pickup trucks? Many people are buying new pickups, and they are equally as important and interesting to them as new passenger cars.

Gene Abell Clarkston, Wash.

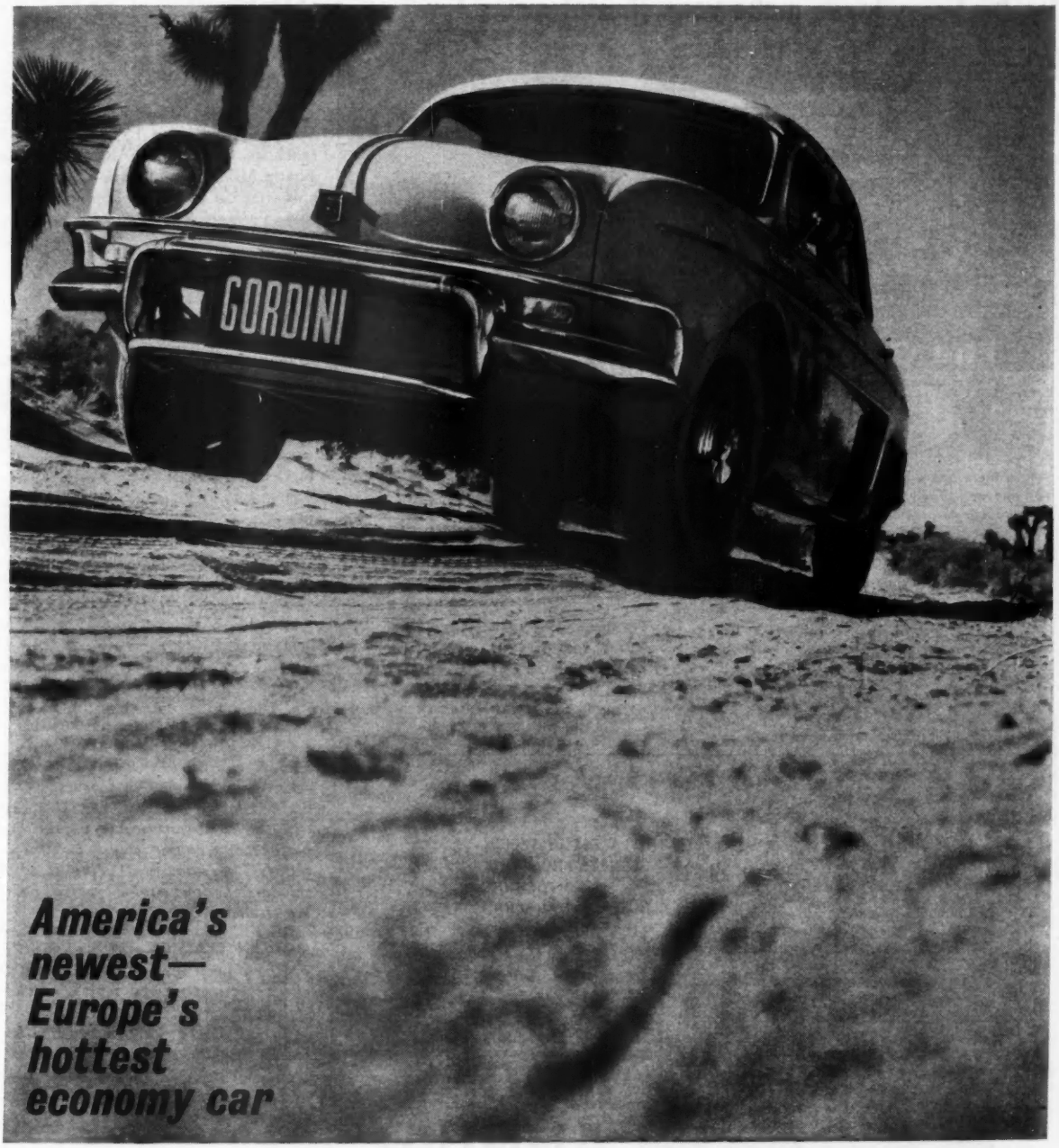
Road tests of pickups, buses, and more wagons will appear in early issues of MOTOR TREND.

HERE WE GO AGAIN!

In your May issue I read Mr. Milne's statement that a Corvette is "America's fastest production car." Also, Mr. Gentile states that "A Corvette with any of its engines can take a Ford hands down!"

I disagree with both statements. A 375- or 401-hp Ford with one of a full dozen available gear ratios, from 3.40 to 5.83, will outrun or outdrag a stock Corvette.

A 1961 Ford Starliner broke the track



America's newest— Europe's hottest economy car

The new Renault Gordini has consistently outperformed every other economy car in major rallyes from the Alps to Africa. / Having proven itself over the most gruelling courses in Europe—you can imagine how the Gordini will perform on big city streets or out on the highway. / The Gordini's sports-car-like response comes from a husky, rear-mounted engine that delivers up to 37 m.p.g. and a close-coupled, fast-shifting, 4-speed transmission that precisely controls power delivery. Agile steering and independent 4-wheel suspension keep the Gordini perfectly poised under the most challenging road conditions. / A unitized body adds strength and durability. Wet-type cylinder liners cut engine maintenance costs dramatically. / Though the Renault Gordini performs like a sports car, it gives you the convenience of four doors, the luxury of deluxe appointments, the comfort of foam-padded reclining seats, and a **12 month or 12,000 mile Renault Warranty.** / Meet the hottest economy car in America—the Gordini—at your Renault Dealer's. $1596*

*Suggested List Price, Fully Equipped, P. O. E. East & Gulf Coasts

RENAULT Since 1898

gordini ***Competition† History—proof of its ruggedness and spectacular performance:*** **Tour de Corse,** 1958, 1959, 1960—1st Place / **Rallye Neige et Glace-Grenoble,** January, 1959—1st Place / **Ivory Coast Rallye-Abidjan,** February, 1959—1st and 2nd Place / **Mille Miglia-Brescia,** May, 1959—1st, 2nd, & 3rd Place / **Senegal Rallye-Dakar,** June, 1960—Overall 1st & 2nd Place / **French Mobil Economy Run,** July, 1960—1st Place.

†COMPETITION CLASS: UP TO 1000 CC.

LETTERS

continued

record at the Daytona International Speedway, recording 153.335 mph. Another '61 Ford turned 154.972 in the Flying Mile on the beach. The next day this same car turned a whopping 159.32.

Can any stock Corvette match this?

H. C. Herbst II — Chattanooga, Tenn.

POWERGLIDE AVAILABLE

I would like to correct the statement made in your Corvair road test (May MT) that "the higher-powered engine is available only with the three- or four-speed manual transmission."

It is possible to get the Powerglide with the 98-hp engine.

H. T. Rutherford, Jr. — Honaker, Va.

MPG — NOT MPH

I am confused by the figures appearing in your "Speed Weeks" report in the May issue. It seems funny that the Chevy Impala can do no better than nine mph!

James Prokes — Chicago, Ill.

This was an unfortunate typographical error. The heading at the top of the last column should have read "Mpg" — not "Mph"!

NO AIR CLEANER?

In your May issue you state that no air cleaner is offered with the Dodge Lancer. Yet, in the cutaway drawing, your artist shows an air cleaner.

Pat Shannon — Knox City, Tex.

There is no air cleaner on the high-performance engine, which was the one tested. The cutaway drawing is of the standard Lancer engine, which has an air cleaner.

MODERN CLASSICS

I have been reading the many articles and reports about the revival of classic styling.

I believe the long hood and short trunk area, the separate fender lines in front and rear, the fully exposed wheels and the limousine-type roof line are some of the characteristics which made most of the older cars classics.

In my opinion, there are three cars that can be termed "modern classics." All three were created by the Ford Motor Company.

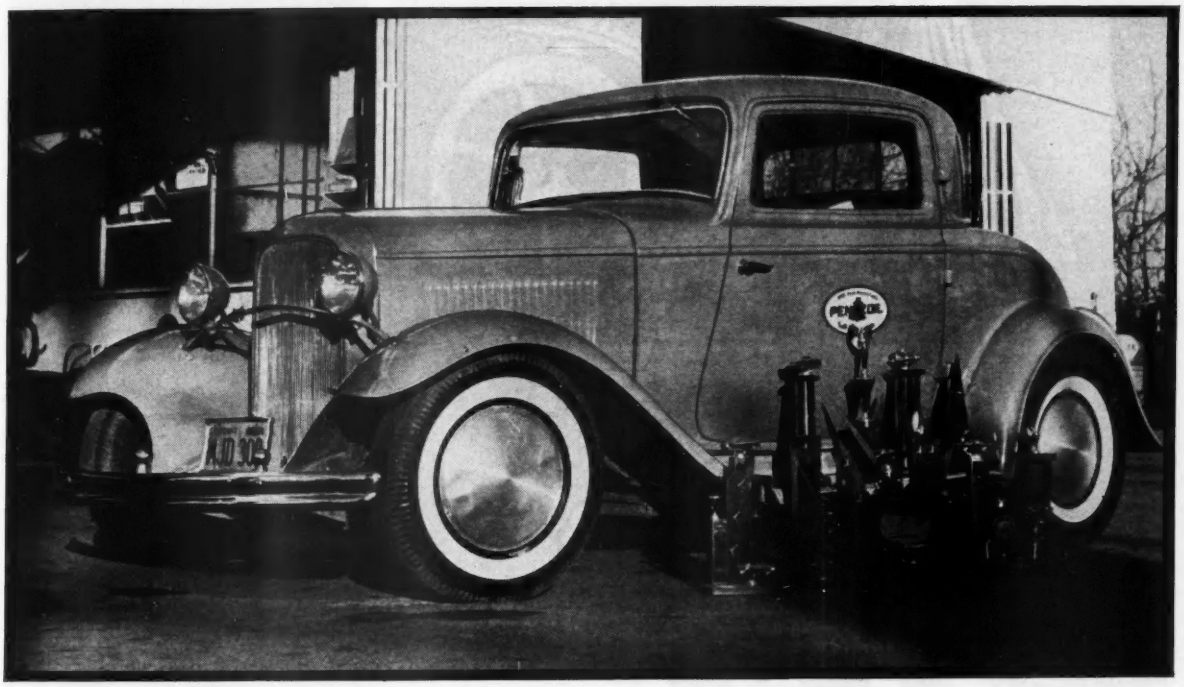
First is the '56 Continental Mark II. This car had no excess chrome or fins. The fully exposed wheels, the continental kit and the roof line gave it that "classic" look. The grille, bumpers, headlights and taillights were all simple, yet attractive. The car had a feeling of elegance.

The other two cars that I consider modern classics are the '61 Lincoln Continental and Thunderbird.

Vincent Galasso — Rochelle Park, N.J.

17 straight wins in ¼-mile drags

This front-running Class C gas Drag Coupe has standard 1932 Ford Coupe chassis and rear end, 283 cu. in., 290-H.P. Corvette engine, and 1939 Ford transmission. Owners are George Izu, Brookie Ishimatsu, Jess Weigel of Action Auto Service, Monta Vista, Cal.



In seventeen times out — seventeen times this Class C gas Drag Coupe came home a winner! It beat all competitors in its class for a grand sweep at the Halfmoon Bay Drag Strip Championship Races. Won consecutively every showing it made in the "Best Looking" Car Class at the Fremont Drag Strip. And established an E.T. of 13.17 seconds, with a top speed of 107 MPH!

One of its owners, George Izu, says, "We have found that our choice of motor oil is a very important factor in racing. The engine is subjected to maximum RPM and terrific pressures. That's why we use Pennzoil—because it maintains better lubrication at extremely high speeds.

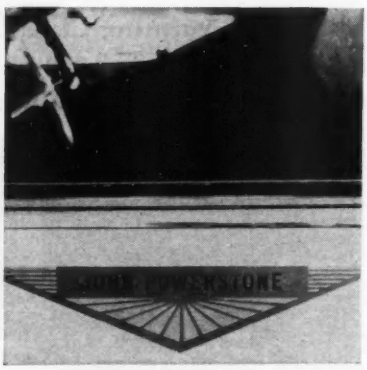
"We have run this car under these conditions in about 200 quarter-mile races or heats, with no engine failure. That's pretty rough service, but it proves that Pennzoil can really do a job."

Treat *your* engine to this amazingly pure Pennsylvania motor oil. If your favorite dealer doesn't display Pennzoil Z-7, ask for it, *insist* on it *by name*—wherever you drive, whatever you drive.

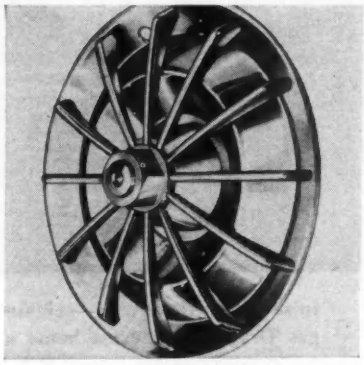
Richest, most complete motor oil in the world

Member Penn. Grade Crude Oil Assn., Permit No. 2, Oil City, Pa.

NEW PRODUCTS



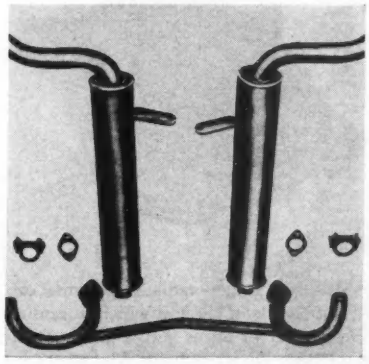
AUTO NAMEPLATE can be engraved to order on brass plate. Just remove backing and apply to door or dash. $1.95 each, 2 for $3.50. Anderson Products Co., Box 607, Bloomfield, N.J.



TURBO PROP, the latest design in wire-spoke wheels from Namsco, Inc., resembles a turbine engine's blades. Price for set of four is $75. Write Namsco, Inc., Bellwood, Ill.

DUST-O-MATIC, a permanent-type carburetor air cleaner, can be readily cleansed with kerosene, etc. Cost is $3.95. Dust-O-Matic Filter Sales Co., P.O. Box 5039, Detroit 35, Mich.

AIR CONDITIONER for compacts is designed to provide quiet, adequate cooling for smaller domestic and imported cars. Write Climatic Air Sales, Inc., 3030 Canton St., Dallas 26, Tex.



DUAL EXHAUST SYSTEM for the 1961 Corvair comes as a complete kit, with no cutting, welding or notching required. Douglass Muffler Mfg. Co., 5636 Shull St., Bell Gardens, Calif.

1961 PALMINI catalog has illustrated sections, listing parts and accessories available for karts. Send 50c to Palmini Engineering Corp., 3156 N. San Gabriel Blvd., South San Gabriel, Calif.

continued on page 16

NEW PRODUCTS
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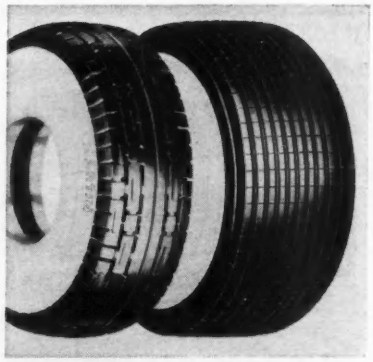
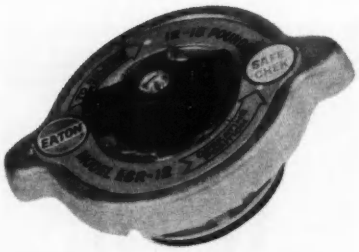


WHITEWALLS are offered by Martin Custom Tires for classic models of the Rolls-Royce, Cadillac, Pierce-Arrow, Packard and similar makes. Tires Incorporated, 666 11th Ave., New York 19, N.Y.



SAFE-CHEK, a new radiator pressure cap, has a handle at the top which minimizes the danger of burns and scalding. Write Stamping Division, Eaton Manufacturing Co., Cleveland 10, Ohio.

NEW KEY CASE combines a gauge that will read tire pressures with a plastic case for three keys. Price is $1. Danvern Distributors, Dept. 50, P.O. Box 453, Willoughby, Ohio.

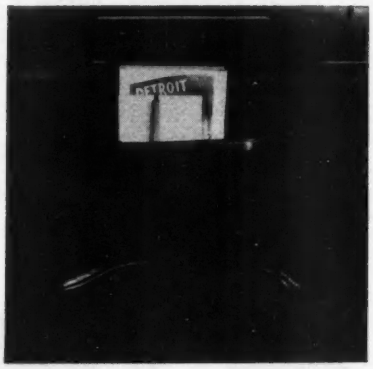
continued on page 18

NOT KNOWN FOR CHROME

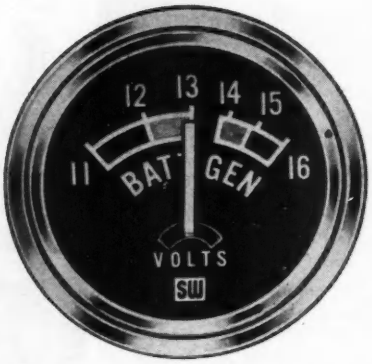
We have never believed that most spark plugs are sold on the basis of appearance. That is why our spark plugs are a rather conservative blue, rather than plated as seems to be the common practice these days. We have nothing against plating plugs, except that it creates a problem for us that some other manufacturers do not face. We have always maintained that if heat-sealing was the only positive way to prevent compression leakage, then every spark plug made should be heat sealed. Some other manufacturers do not agree with us. They heat seal the spark plugs they make for severe military service, and their special racing spark plugs, and their aircraft spark plugs, but not the spark plugs they sell for standard automobiles. As a result over half the spark plugs sold in this country are not heat sealed. Autolite heat seals every plug it makes, whether for racing, the military, aircraft, or your car. We not only heat-seal the center electrode to the insulator, but for extra protection we also heat seal the insulator to the outer steel shell. Because of this dual heat sealing process, we cannot plate Autolite spark plugs. The plating just couldn't stand up under the tremendous heat and pressure we use to seal our plugs. It would crack, peel, discolor. We feel that the added protection against loss of power and economy that our sealing gives you more than makes up for what we must admit is a less attractive exterior. If you agree with us, next time you need a set of plugs why not ask for Autolite Spark Plugs by name?

AUTOLITE®

NEW PRODUCTS
continued



MOPAR PARTS has introduced a new litter basket and storage bin. Its weighted, flexible base clings to floor, seat or transmission hump. Available from Chrysler Corp. dealers.



NEW INSTRUMENT, Model 375-E Battery/Generator Indicator, is both a battery condition indicator and a volt meter. Write Stewart-Warner Corp., 1826 Diversey Pkwy., Chicago 14, Ill.

SUPERLIFT, an adjustable suspension device by Delco Products, has chambers which are inflated, using service station air pumps. Available at most service stations.

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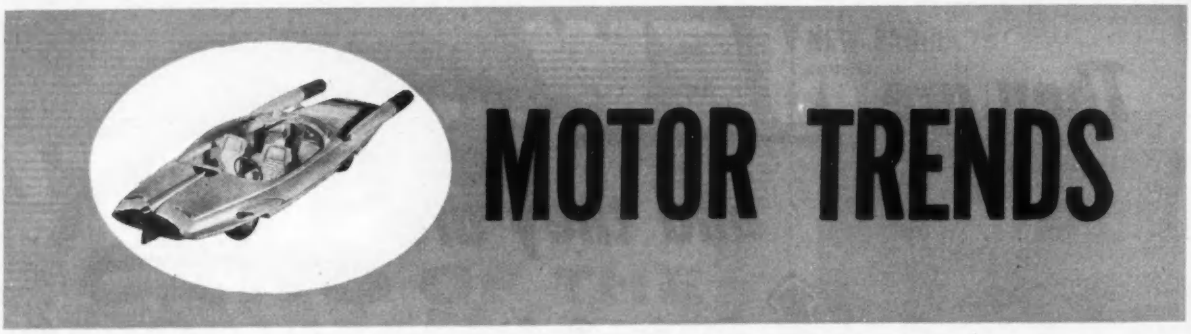

MOTOR TRENDS

Look for greater design differences between the 1962 Falcons and Comets. Both cars have been exceptionally successful so far. But, according to informed sources, the top brass at the Ford Motor Company figures the two makes may do even better with more individualistic features.

A merger between American Motors and Willys? There is some talk in Detroit that this may happen. And a combined operation could be mutually advantageous, since it would result in a line of dealers handling both passenger cars and trucks. It is known that there have been discussions between the two firms already regarding certain limited joint activities.

More data from Germany on the new Volkswagen 1500. The very flat, rear-located engine, which enables a trunk compartment above it, employs fan and carburetors at one end of the engine, rather than on top (as on the Corvair). Wheelbase and tread are identical to the current VW.

It's now definite that the Buick Special and the Olds F-85 will be powered by a cast-iron V-6 engine in 1962. Reason for the switch is the need to make the two cars more competitive, price-wise, with other compact cars. At present, with the aluminum V-8, they cost about $200 extra – and this apparently has been holding down sales.

What will happen to the small aluminum V-8 now used in the F-85 and the Special? It is reported that this engine will be offered in the standard Buick and Olds lines with higher horsepower ratings.

Biggest news in the 1962 models will be the new lines of cars now generally referred to in Detroit as "senior compacts." These cars are designed to fit in between the existing compacts, such as Falcon and Corvair, and the full-sized Fords and Chevrolets. Dart and Plymouth are believed to be preparing cars of similar size.

Both Ford and Chevrolet have settled on names for their senior compacts. So far the forthcoming Ford has had a code name of "Canadian X," but when it appears in the fall as a 1962 model it will bear the familiar name of "Fairlane." A companion model for the Mercury division, until now designated as "Canadian Y," will be called the "Meteor" when it is announced.

At Chevrolet, the name selected for its new senior compact reportedly is "Corsair." The similarity to the Corvette and Corvair names is obvious and may lead to some confusion – compounded by the fact that there once was an Edsel series by that name.

Engine lineup for the 1962 senior compact from Chevrolet, the *Corsair*, will be more varied than any other car. It will include the 283-cubic-inch V-8, an in-line Six (probably the same one already offered in the standard Chevrolet) and a new four-cylinder engine which will be one bank of the V-8 – the same trick Pontiac used in its Tempest.

Ford's 1962 senior compact, the Fairlane, along with the Mercury version, the Meteor, will have at least one all-new engine. It will be a 221-cubic-inch V-8 of cast iron. Other existing Ford engines probably will be options.

Latest prototype of the 1962 smaller car by Ford was flown from Germany to Dearborn for final checkout. The car, called the Cardinal, has been seen at Dearborn in various forms for nearly a year. When the car will be announced is not yet clear – some sources say at the usual fall announcement time, others insist it will be a late 1962 model and will not appear until next spring.

It is clear, however, that the car will be a combination of international components. The chassis will be European manufactured, the body made in the U.S., with final assembly in the United States. This car will compete directly with Volkswagen and Renault in price, size and performance. The Cardinal engine is an air-cooled V-4.

Chevrolet has made an unprecedented agreement (for Chevrolet) to sell V-8 engines to a British firm for use in a sports car to be sold in the United States. The car is called the Gordon. Body styling is by Bertoni of Italy.

The 1962 Imperial will be a major styling change. Rumors that the car would be discontinued or merged with Chrysler as a series of that line have been officially denied. The 1962 model will be built on Chrysler production lines, however, although it will continue to be a body-and-frame design and not a unit-construction design as Chrysler has been.

American Motors is joining the bucket-seat brigade. Seats will be optional at extra cost in Ambassador and Classic four-door sedans and in the American convertible. They will be of the semi-bucket type.

Detroit faces the threat of federal and/or state laws requiring certain safety features to be built into cars. Rather than be compelled to accept these features, the auto makers are considering adopting them voluntarily. So presently they are dusting off several developments for possible use. Among them:

(1) Padded head rests to reduce whiplash neck injuries –an item already offered as an option on Ramblers; (2) recessed interior door handles; (3) warning light to indicate low fuel level in gas tank to reduce stalling on expressways; (4) rear windshield wipers and defrosters; (5) automatic headlight dimmers for all cars; (6) more headliner padding to protect against more head injuries; (7) recessed package shelf. Another good possibility is seat belts offered at cost for installation on attachment points, which will be standard in all 1962 models.

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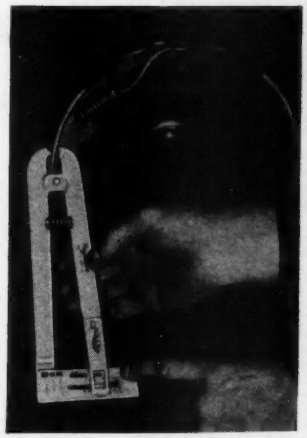

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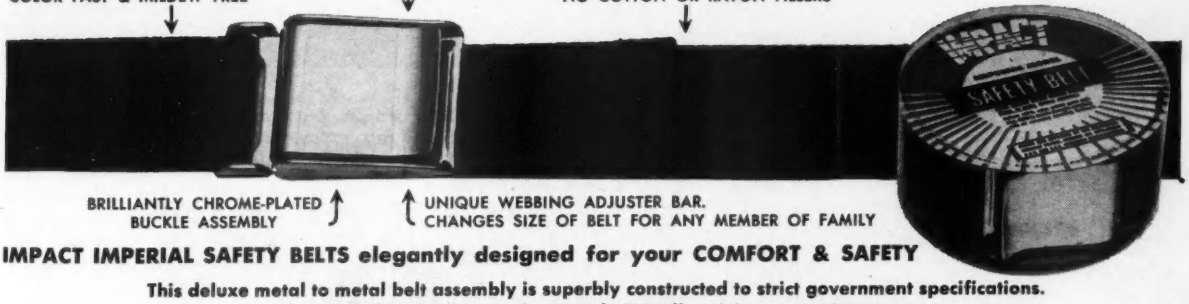

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The recently revealed Sebring Spyder Corvair is based on 1961 Monza, but has a highly modified engine, developing considerably more horsepower, and an extensively restyled interior. Three circular lights at the door's edge (above) go on when the door opens.

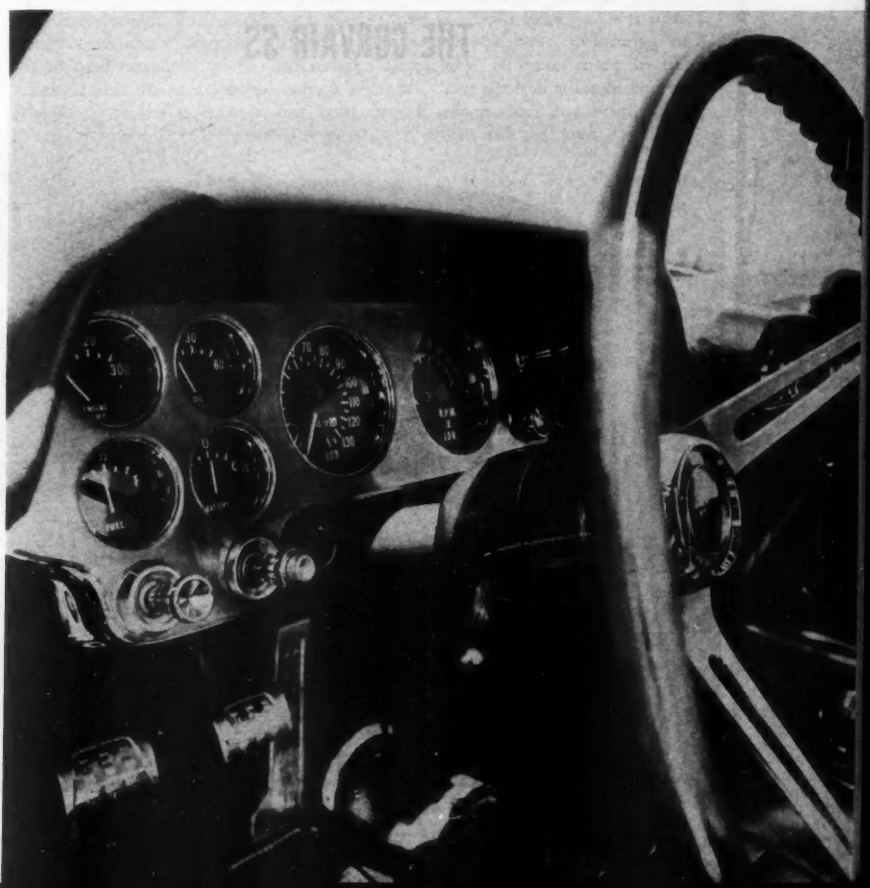
THE CORVAIR SS FROM CHEVROLET

The Sebring Spyder is an experiment that goes one step farther than the popular Monza

Restyling of the Corvair Monza into the Sebring Spyder is most apparent on the outside from the rear. Taillights have been altered, a new screen of chromed horizontal bars runs across the grille under bumper.

IN AUGUST OF 1960, less than a year ago, Chevrolet revealed an experimental prototype of the Corvair, which it called the Monza. It attracted remarkably wide and favorable attention, and a few months later the Monza went into production as a 1961 model. Since then it has been a smash hit and probably has been largely responsible for the Corvair's vastly greater popularity in its second year than it achieved in its first. And while the Monza was not the original car to offer bucket seats, it unquestionably was the single major influence in causing other car makers to be rushing right now into production with special versions of their compacts with similar features.

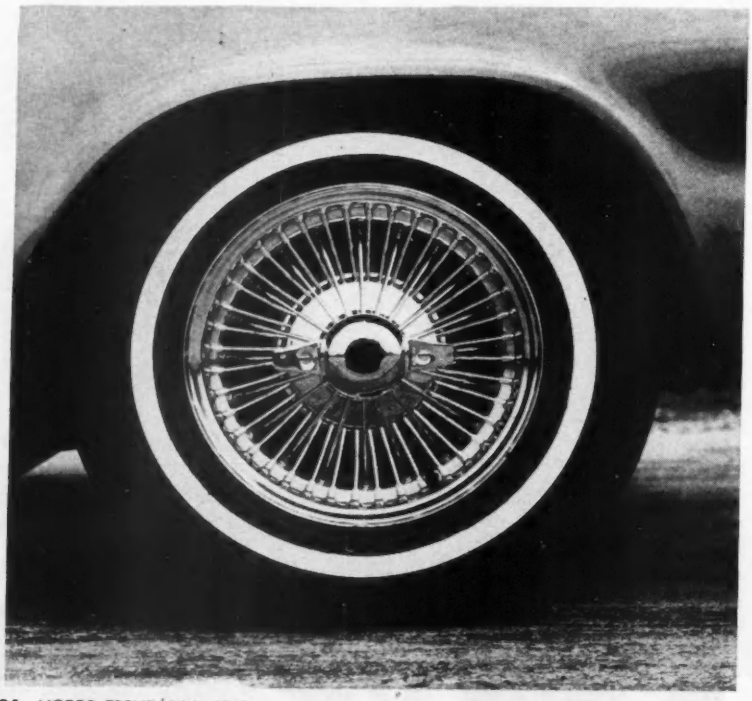
Now Chevrolet has just revealed another experimental Corvair, this one designated the Sebring Spyder coupe, or in abbreviated form, the Corvair SS. It is a clear step upward from the Monza in sporty luxury and is especially well fitted out. Whether or not the Sebring Spyder



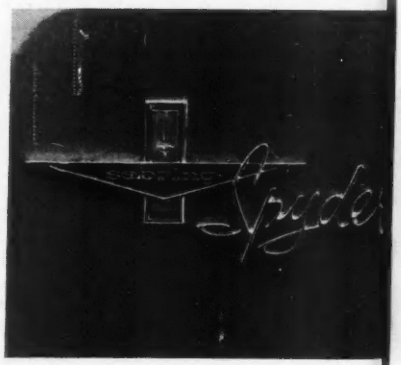
Close-up of new dash shows complete set of instruments including tach, in brushed aluminum face plate.

The engine has been modified with two additional carbs, special cam and progressive throttle linkage to increase horsepower close to estimated 130. Dual straight-through mufflers with cross-over exhaust pipe are used.

THE CORVAIR SS



Wire wheel is unusually handsome, with full set of spokes. Use in production is doubtful, however, because of the high cost of units.



New Sebring Spyder emblem on front fender also appears on lid of glove box inside. The designation, a combination of European and U.S. sports car terms, is appropriate to the character of the car.

will ever reach production is pure conjecture at this stage, but it is very likely that some of its features at least will ultimately appear on Corvairs. They are that good.

The Sebring Spyder is basically a 1961 Corvair, with a few exterior restyling touches, rather extensive interior alterations and a highly modified early Corvair flat-six engine. The exterior changes, mostly at the rear of the car, are mainly in paint and trim, along with the addition of a special Sebring Spyder emblem on the side of the front fender.

Inside there are bucket seats, of course, in leather. The doors have brushed aluminum panels with three rectangular insets of leather. And at the rear of the doors are three red warning lights which are automatically illuminated when the doors are opened. On the front floor, the very low hump is cased in ribbed aluminum, into which is set the gear lever for the manual four-speed box.

Most notable interior features are the steering wheel and instrument cluster. The wheel is a competition type of three spokes, each containing a single elongated perforation, a natural-finish walnut rim and an "SS" emblem at the hub. The dash is outstanding in its functional simplicity and full instrumentation, with needle-type gauges, including a 5,000-rpm tachometer. The face plates of the instrument cluster, the radio-clock console and the glove box are all of brushed aluminum.

The Sebring Spyder Corvair is equipped with a specially modified engine of 145 cubic inches. The rated horsepower output is not specifically quoted by Chevrolet, but it is estimated to be close to 130 hp.

There are four single-throat carburetors mounted on top of the intake manifolds, each one so positioned that it sits midway between two cylinder barrels. Progressive accelerator linkages are set up to open secondary throttles after the primary throttles are opened more than half-way. Polyurethane oil-wetted filters are on the manual-choke primary carburetors only. The intake manifolds are not special on this engine, but are stock units machined to accept the secondary carbs. Inside the engine is a camshaft ground for this particular engine.

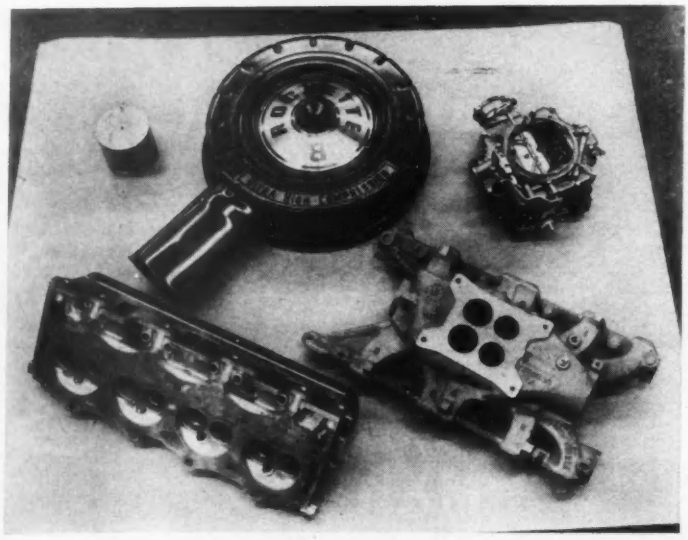
The suspension elements of the Corvair SS include heavy-duty springs and shock absorbers, a front stabilizer bar and rebound straps at the rear. These will give the car a firmer ride but improve its handling characteristics.

Except for the wire wheels with knock-off hubs, which could only come as a very high-cost option, the Corvair Sebring Spyder is a logical and highly desirable evolution from the Monza. It certainly deserves to be in production and, like the Monza, undoubtedly would again start a new trend in sporty compacts. /MT

The New Sprite from Austin-Healey

ONE OF THE TOP SPORTS CARS in popularity in the U.S. is the Austin-Healey, and one reason why it's so popular is the sprightly, smaller version called the Sprite. There is a new model of the Sprite which has just been revealed in England. The first photos, above and below, show the major changes that have been made in the car. Both front and rear have been extensively restyled and while this was being done, a number of functional revisions were undertaken. There now is more room in the cockpit and the metal panel, which formerly came up immediately behind the back of the front seat, has been cut off. More space has been made available behind the driver and passenger, which can be used for extra luggage or children.

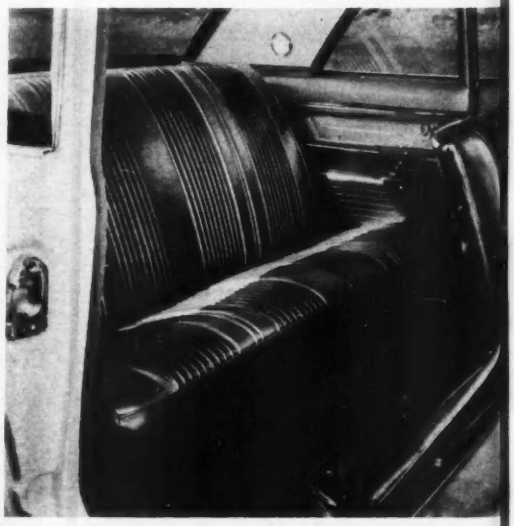
There is now an enlarged engine compartment hood and, for further easier access, there also has been added a trunk for entry into the area formerly reached only from behind the seats. According to the preliminary information, there have been no significant alterations to the engine and chassis. This then means the car will be powered by the 48-hp engine, enables a top of about 80 mph and yields over 30 mpg. The Sprite's companion car is, of course, the Austin-Healey 3000, and both are products of the British Motor Corporation. It is reported in England that this new Sprite design will be the basis for a forthcoming MG midget. /MT



Modified components of the F-85 aluminum engine are shown at left. With these refinements the powerplant output is raised to 185 hp.

OLDSMOBILE'S F-85 CUTLASS

Front bucket seats are not on option but standard equipment on the Cutlass. Individually adjustable, they have vertical leather pleats.



Extra features for rear passengers are convertible-type armrests on each side of bench seat and dual courtesy lights.

A SPORTY NEW COUPE MODIFIED FOR EXTRA PERFORMANCE AND HIGH LUXURY

NEW COUPE ROOF LINE IS OFFERED WITH THE DELUXE OLDSMOBILE CUTLASS (ABOVE) AND A MORE ECONOMICAL CLUB COUPE.

ALTHOUGH MID-YEAR NEW MODELS are no longer a novelty, Oldsmobile's two new F-85 coupes are of more than passing interest. The Cutlass is a peppy sports coupe with a showy interior and the increasingly popular semi-bucket seats. The other new F-85 is a club coupe and will be the lowest-priced Oldsmobile available.

The standard powerplant in the Cutlass is Oldsmobile's four-barrel-carburetor version of GM's compact aluminum V-8. With new cylinder heads, the compression ratio has been upped to 10.25-to-1, making premium fuel mandatory. The higher cost for gas will be compensated for by the extra power the engine produces, 185 hp at 4800 rpm and 230 lbs.-ft. of torque at 3200 rpm. The Cutlass should be a far better accelerator than a standard F-85, for the axle ratio has been upped to 3.36 for both the standard manual transmission or the optional, scaled-down Hydramatic. Other engineering details are the same as a standard F-85. Probably the most interesting is the split driveshaft with a constant-velocity joint. This eliminates much vibration and helps improve the ride.

The popularity of the many new sports coupes now being introduced seems to be tied closely to bucket seats, and the Oldsmobile Cutlass is no exception. Its semi-buckets are individually adjustable and fold over flat to make getting into the back seat easier. Although each front seat is separate, no console is built between them. They are contoured, and extra-thick foam rubber cushioning is used both in front and back.

Front and rear floors, lower door panels and front cowl kick panels are carpeted in the Cutlass, and an instrument panel safety pad is standard. The upholstery is vertically pleated, and two-tone combinations are used on all sports coupes.

Other custom features on the Cutlass interior include dual courtesy lamps in the rear quarter pillars, dual ash trays recessed in the convertible-type rear seat armrests, deluxe steering wheel and chrome roof scalp molding. Built into the ends of the front armrests are red safety reflectors that will warn oncoming drivers when a door is opened at night.

The exterior of the Cutlass is not vastly different from a standard F-85. The most striking feature is a shortened, crisper roof line with a rectangular rear window. Available as an extra-cost option is a textured white all-vinyl roof covering, which gives the Cutlass a simulated convertible look. On both sides of the car, identifying Cutlass emblems appear on the upper rear quarter panels.

List price on the new F-85 Cutlass sports coupe will be $2621, slightly more than $100 over the price of a deluxe four-door sedan.

The second new F-85 model introduced this summer is the two-door club coupe. Equipped with the standard 155-hp aluminum V-8, this version burns regular fuel. Its interior appointments are similar to those offered in the four-door sedan. Perhaps its most attractive feature is the price, approximately $2300. /MT

BUYER'S GUIDE TO THE 1961 CARS

a comprehensive test analysis of the current models

THE GREATEST RANGE OF TESTS IN MT'S HISTORY

CHEVROLET
two cars tested

DODGE DART
two cars tested

FORD
two cars tested

PLYMOUTH
two cars tested

RAMBLER
three cars tested

STUDEBAKER HAWK
one car tested

AMERICAN
two cars tested

BUICK SPECIAL
two cars tested

CORVAIR
two cars tested

COMET
one car tested

FALCON
two cars tested

LANCER
three cars tested

LARK
four cars tested

OLDSMOBILE F-85
two cars tested

TEMPEST
three cars tested

VALIANT
two cars tested

BUICK
two cars tested

CHRYSLER
three cars tested

DODGE
two cars tested

MERCURY
two cars tested

OLDSMOBILE
two cars tested

PONTIAC
two cars tested

CADILLAC
one car tested

IMPERIAL
one car tested

LINCOLN CONTINENTAL
one car tested

THUNDERBIRD
one car tested

by Don Werner

ANYONE WHO SETS out to buy a new car in 1961 needs to know more about what he is doing than ever before. A lot more.

First of all, there are many, many more makes of cars from which to choose. The list has nearly doubled in a couple of years.

Then there are many makes of cars that now come in a bewildering variety of forms. These cars are available in ranges that start at relatively cheap economy versions and run up into the high-priced plushy performance cars.

All this is made even more complicated by the fact that it is possible to buy luxury versions of so-called economy cars or "stripped" high-performance full-sized machines for a lower price. In between these extremes, there are a thousand buying points to suit individual preference.

It often is said that the variety in domestic cars is more apparent than real. It is pointed out that quite a few of the different makes of cars are basically similar. This is quite true — up to a point. But such comments are in terms of car design and not car buying.

The Falcon and Comet, it is perfectly obvious, come from the same mold. When the time comes to put one's money on the line and choose between them, however, there is a very real *difference*. Another example of this, if one is necessary, is the Buick Special and the Oldsmobile F-85. These two cars also share major body and engine components but anyone who says they are identical in terms of buying and driving them simply doesn't know what he is talking about.

Nearly one out of every three people who buy a car select a standard-sized Chevrolet. When they do, they are confronted with the most intricate array of choices that exist in any popular manufactured product. Not only does the Chevrolet come in the Biscayne, Bel Air and Impala and Super Sport series, but there are four different engines — a six-cylinder and three sizes of V-8's — plus five distinctly different transmissions, almost every kind of carburetion combination and a good half-dozen different axle ratios. There's much more to the Chevrolet list but the foregoing items indicate the problems and the importance of correct selection.

The Chevrolet is not an isolated example of such variety. A similar situation exists with Ford and Pontiac and Plymouth and Dodge and, to a lesser degree, with several other makes.

How critical all this would be to the car buyer who tries to buy intelligently was evident last fall at the time the 1961 models were initially announced. It was then that the editors of MOTOR TREND mapped out a particularly ambitious program of road testing. This program included not only full-scale road tests of every make of car, but where it was required there were to be full-range road tests that sampled a cross-section of engine-transmission-axle combinations.

This unprecedented road test program has now been concluded. The editors of MOTOR TREND have fully road tested every make of car. In all but a few cases, at least two cars of a given make were tested and, when necessary, three and sometimes four cars were put through the schedule. The mass of experience and factual data assembled in this program unquestionably is unsurpassed.

The time has now come to draw final judgments and conclusions on the 1961 standard passenger cars. Two of MT's Senior Editors, Robert Ames and John Lawlor, who were actively engaged in the road test program throughout the schedule, have condensed all the essential information into a series of special reports for the 1961 MOTOR TREND Buyer's Guide. What they have summarized is the consensus of opinion of the complete road test staff.

For the average car buyer a new car is an expensive investment and he has every right to expect pleasure and satisfaction from his purchase. Too often, however, there is dissatisfaction and complaints. And the reasons are the mistakes made at the time of selection.

Many car buyers will decide on the basis of external appearance — style, color, trim, upholstery, etc. — with little or no consideration for what is underneath the sheet metal. A driver who is interested in, say, good gas mileage and smoothness will find he has a hot performance job that can outcharge any other car at a traffic light but gives poor fuel economy and has a rough idle and an appetite for frequent tune-ups. The other type of driver, fond of quick acceleration, who buys carelessly may end up with a car that wouldn't be a good match for anything quicker than a motor scooter.

There is one other major factor in this matter of car buying. Detroit, so far at least, has not built the perfect car. There are cars to suit nearly every purpose but none that is the complete answer to every requirement. All 1961 models are good cars, but in different ways and, equally obvious, each has certain exclusive defects. Some cars are outstanding in economy, some in performance; others are superior for quality, roadability, good functional design, clever features and so on. What it amounts to is a hash of different characteristics.

The Buyer's Guide to the 1961 Cars on the following pages consists of five sections: a guide to the low-price cars, the compact cars, the medium-price cars and the luxury cars — plus a table of specifications. In the guide is everything a car buyer needs to know. And that's a lot.

THE LOW-PRICED CARS

STILL THE MOST POPULAR SIZE AND CATEGORY, THIS CLASS OF CARS HAS TREMENDOUS VARIETY FOR THE BUYER

by John Lawlor

VARIETY IS THE ESSENCE of the low-priced makes. Chevrolet, Dodge Dart, Ford and Plymouth are all available with extremely broad choices in power teams, while the Rambler Classic and Studebaker Hawk add to the kinds of cars in the field. All six are described in detail in the reports that follow.

Another make which could be considered here is Mercury. Its new Meteor 600 and Meteor 800 are certainly low priced. However, the 1961 Mercury was tested in the costlier Monterey series, and the Meteors were not considered sufficiently different to warrant a separate report. The 600 is almost identical to the current Ford and, with its slight variation in suspension, the 800 is mechanically the same as the Monterey, discussed with the medium-priced cars.

A similar relationship exists between the Plymouth and Dodge Dart. Engine choices in these two lines, though, are broad enough that it was relatively easy to test both without duplicating power trains.

The Rambler Classic was originally tested as a compact V-8 but, on the basis of its price and power, is reviewed with the low-priced big cars. Also, this permits information on the non-compact Ambassador to be included. The senior Rambler was actually tested earlier but judged so similar to the Classic that the results were not published.

The Studebaker Hawk is probably the most unusual car in the entire class. It has the strong appeal of its distinctive appearance and superior road behavior and, in addition, delivers both performance and fuel economy comparing favorably with the figures for its peers in price.

In the final analysis, however, the two low-priced cars that are of the greatest general interest are those perennial favorites, Chevrolet and Ford. From the showroom to the drag strip, these are the traditional rivals that are talked about more than all the other low-priced cars combined. It is as risky to oppose motherhood or the American flag as it is to condemn one of these makes in the presence of its devotees.

The reports themselves are concerned strictly with V-8's. Six-cylinder engines, available in all lines but the Hawk, have not been included. However, the more significant of them are scheduled for separate tests in the near future.

But even with this limitation, the low-priced cars vary so much in complexity that no effort has been made to devote the same amount of attention to each make. Unlike the television networks, MOTOR TREND has not devoted equal time to each candidate. Chevrolet and Ford, for example, both have unusually wide ranges of options this year and are discussed at greater length. The Hawk, on the other hand, comes with a rather limited choice and is treated more briefly.

Rumor has it that the 1962 models will come in even broader variety, but it is difficult to understand why. There is something for just about every driver in the current crop of low-priced cars.

FORD

Though the new Ford is smaller than last year's, it is the same in basic design and comes in the same three series: Fairlane, Fairlane 500 and Galaxie.

The engine lineup, however, includes several new choices. The standard V-8 is a 292-cubic-inch, 175-hp unit, while the most conservative option has 352 cubic inches and 220 hp. New for 1961 is a 390-cubic-inch enlargement of the 352 in ratings of 300, 330 and 375 hp. And with a special parts kit installed by the dealer, it can be pushed to 401 hp, one of the highest outputs quoted for any factory-authorized powerplant.

MT's staff drove 175- and 300-hp Galaxies and discovered an unusually wide variation in performance. The 175-hp car scored the poorest acceleration time of any new V-8 tested, while reserve power for passing proved extremely limited. Fuel consumption, however, was moderate. The 300-hp Ford is the normal performance choice for those not interested in police work or racing and showed figures on a par with other cars of similar power.

Ford offers four transmissions: a three-speed manual, overdrive and two- and three-speed automatics. There are some restrictions on combinations; the two-speed automatic is not available with the 390-cubic-inch engine and no automatic at all can be had with the maximum-performance conversions.

Both automatics are variations on Borg-Warner's theme of a torque converter coupled to a gearbox. The nod for performance and flexibility goes, naturally, to the three-speed. One of its best features is that it allows a maximum of driver control over gear selection. On slippery surfaces, for example, it can be placed in second for an easier start, and on downgrades, depending on the car's speed, either first or second can be engaged manually for added braking effect.

The most important change in the chassis for 1961 is concerned not with operation but maintenance. Sealed joints filled with a special compound permit an interval of 30,000 miles between lube jobs.

Ford's suspension is a normal system of front coil springs and rear semi-elliptics with an emphasis on smooth riding qualities. In ability to absorb road shocks, it is best at slower speeds over moderately rough surfaces. As speed and road roughness increase, so does ride harshness. Shallow dips do not cause the undulating so often associated with a soft ride.

On the highway, the car is relatively stable, though some float and side sway are felt. Handling ability in fast turns seems improved slightly this year, but body lean and tire

squeal are still severe enough to affect the driver's confidence. And the power steering's characteristics do not help the handling; despite a good road feel, it is somewhat slow and lacking in precision.

Though the basic body shell continues without major change from last year, one significant difference does stand out — the level of quality is greatly improved.

The interior shows no particular innovation in styling or special features. It is careful assembly and attention to detail that set the new Ford apart from its predecessors. Materials are better, moldings fit well and minor trim is attached firmly. Ford does not yet display the best craftsmanship in the low-priced field but it is much closer to doing so than in several years.

The front seat is rather shallow and forces occupants to sit with their legs stretched forward, though deep foot wells are provided in the rear compartment. On long trips, some people find the low driving position tires them more quickly than erect seating.

Styling modifications, front and rear, have cut the new Ford's overall length, making the car slightly easier to maneuver and park. Another benefit of the new sheet metal is a 10-inch-wider deck lid for better luggage access. The trunk itself, however, is shallow and does not allow full advantage to be taken of its relatively large capacity.

CHEVROLET

Chevrolet has three basic series — the Biscayne, Bel Air and Impala — plus the Biscayne Fleetmaster, a stripped sedan for commercial use, and the Impala Super Sport, a deluxe job with the emphasis on high performance.

Engine choices include a 283-cubic-inch V-8 with either 170 or 230 hp and a 348-cubic-inch unit in ratings of 250, 280, 305, 340 and 350 hp. Finally, a bored and stroked version of the 348, displacing 409 cubic inches and producing 360 hp, is available in limited quantity. Generally, any series is available with any engine. An exception is the Impala SS, which comes only with the hotter options, from 305 hp up.

MT conducted complete tests of two Impalas, one with the 170-hp engine and the other the 250-hp. In addition, an Impala SS with the potent 360-hp unit was sampled briefly, though not fully tested.

For the lowest-powered V-8 in the line, the 170-hp was a reasonable performer and delivered very good mileage. The 250-hp was quicker, of course, though the acceleration figures do not show how great its advantage really was. At highway speeds, it responded much better for passing and climbing than a mere two-second difference in 0-60 time might indicate.

The Impala SS was not run against the clocks but conservative estimates place its 0-60 time at about half the figure of the 170-hp Impala. With its big engine, it is certainly one of the hottest machines to be found in any showroom today.

Chevy has unusually wide range of transmissions. A three-speed manual is standard equipment across the board. In 283-cubic-inch installations, it can be supplemented with overdrive or, with the 348- and 409-cubic-inch powerplants, replaced by a four-speed.

In addition, there are two automatics. Powerglide is a torque converter with a two-speed gearbox that has gained a reputation as a dependable, responsive unit. It is a good choice for performance, as the factory attests by combining it with the 305-hp engine for the hottest automatic power train in the catalog. Turboglide, on the other hand, is a pure torque converter noted for exceptional smoothness. It has a single forward position on its quadrant for normal driving and an extremely low range intended primarily as a grade retarder.

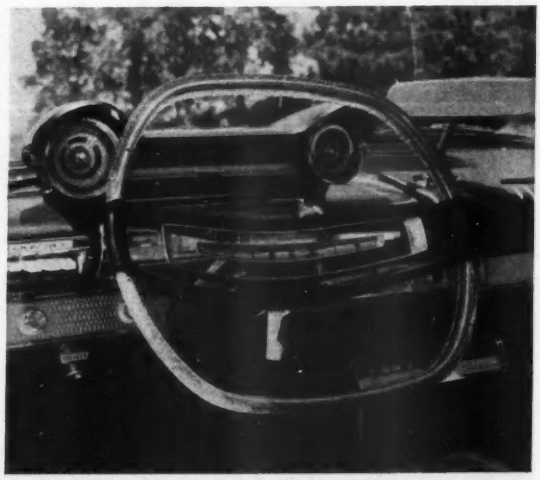
With the 340-, 350- and 360-hp units, only the two manual gearboxes are available, and the four-speed is definitely the better choice. Its second gear neatly bridges a gap between the three-speed's first and second, a useful feature with a fast-revving performance engine.

Like all of GM's big cars, the Chevy for 1961 has a new body but, unlike the others, it retains the basic chassis design used last year. The "X" frame is supported at all four wheels by soft coil springs engineered for smooth riding qualities at all speeds. Chevy's ability to absorb minor road shocks, such as tar divider strips, is probably the best in its class.

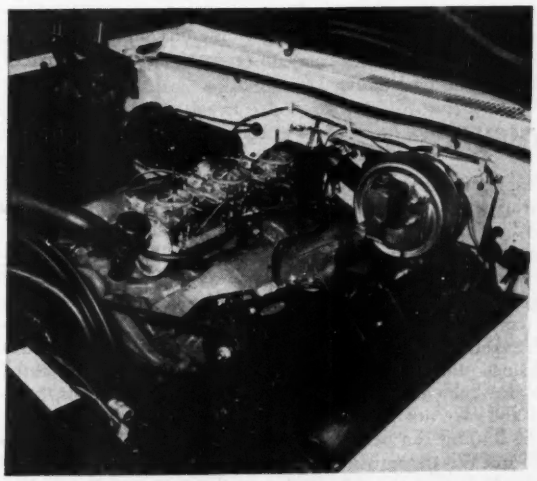
Handling ability, though, is only fair. In tight turns, body lean is considerable and the outside front wheel seems to "skate," conveying a feeling of difficult control.

These remarks do not apply to the Impala SS. Among its special features is stiffened suspension that permits corners to be taken fast, flat and furious. This, of course, is at the expense of comfort. The SS rides very harshly on irregular surfaces.

Chevy power steering has the virtues of accuracy and a solid

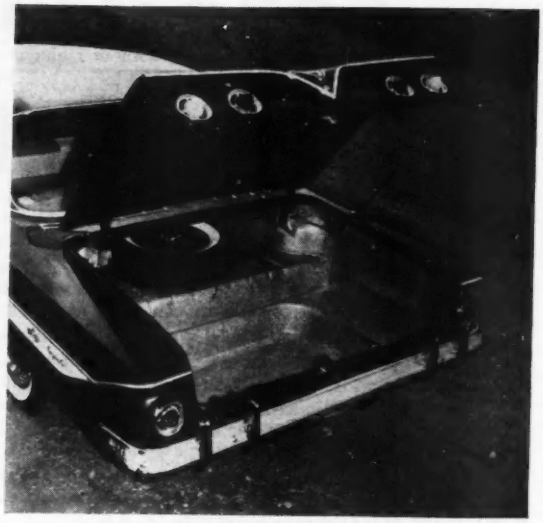


The driver's-eye view from the new Plymouth borders on the spectacular. The floating speedometer sits behind a controversial square steering wheel.



One of the hottest performers of the season has been Chevy's big 409-cubic-inch V-8. Three two-barrels provide the necessary carburetion.

Located next to the carburetor on this Ford V-8 is the positive crankcase ventilating system which is standard on all 1961 cars in California.



Deep in the Chevrolet trunk is one of the most logical and useful changes of the year. Recessed storage well is made by movement of gas tank.

road feel, but is altogether too slow for really proper control.

With its all-new body, the 1961 Chevy is smaller than last year's model, yet provides just as much, if not more, interior space. Seat benches are higher and angled better for comfort. Padding is soft and could prove uncomfortable on a long trip. In the Impala, there is a sewn roll to simulate bucket seats that reduces comfort for a middle passenger.

The redesigned dash has two very good features — a glove compartment at the center within the driver's reach and, at long last, an accessory position on the ignition switch.

An important innovation is found in the luggage compartment. The fuel tank has been moved above the rear axle, allowing a deep trunk floor that will hold several suitcases straight up. And the deck lid extends to the bumper to minimize lifting.

A final word of praise — Chevy quality is extremely good. Both materials and assembly are not only outstanding for a car in Chevy's price class but compare favorably with many makes costing a good deal more.

PLYMOUTH

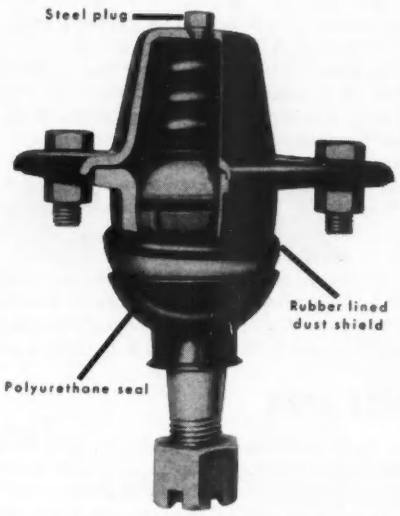
Despite a drastic change in appearance, the 1961 Plymouth is virtually the same car as last year's model. It continues to stand out for performance, economy and roadability.

In Savoy, Belvedere and Fury series, the Plymouth is available with essentially the same engines as the Dodge Dart. For normal driving, these are 230- and 260-hp V-8's, displacing 318 cubic inches, and a 305-hp of 361 cubic inches. High-performance offerings include 325-, 330- and 340-hp, 383-cubic-inch units and brutal 350- and 375-hp options based on a 413-cubic-inch block; these are special-order items, however, and may not be available from some dealers.

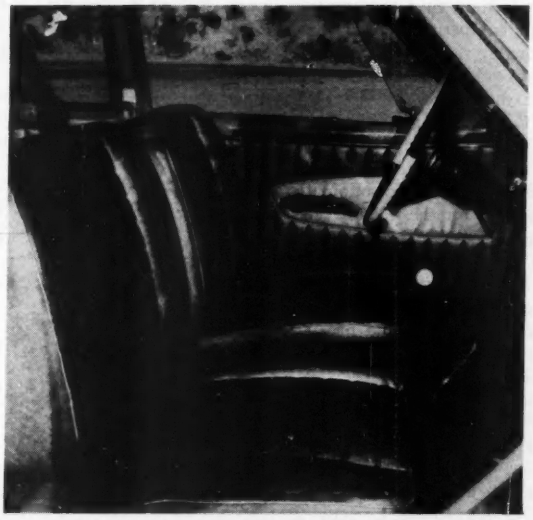
The 230-hp can be had with three-speed manual, Powerflite or Torqueflite transmissions, the 260-hp with Torqueflite only; the others with heavy-duty, three-speed manual or Torqueflite.

Of the two Fury test cars, one had 305 hp with Torqueflite transmission, and the other 330 hp with manual. The first was

CAR	0-30	0-45	0-60	Gas Mileage
CHEVROLET				
Impala Hardtops				
170 hp, Automatic	4.6	7.1	12.2	13-17
250 hp, Automatic	3.8	6.8	10.3	10-14
DODGE DART				
Phoenix Hardtops				
230 hp, Automatic	4.0	6.9	11.5	15-19
330 hp, Automatic	2.5	4.1	6.8	11-15
FORD				
Galaxie Hardtops				
175 hp, Automatic	5.5	9.8	16.2	12-16
300 hp, Automatic	3.7	6.0	9.8	10-14
PLYMOUTH				
Fury Convertible				
305 hp, Automatic	4.0	5.9	9.8	12-16
Fury Hardtop				
330 hp, Manual	3.0	4.2	7.4	11-15
RAMBLER				
Classic Sedans				
200 hp, Automatic	5.0	8.1	13.2	13-17
215 hp, Manual	4.1	7.6	11.9	12-16
Ambassador Sedan				
250 hp, Automatic	4.8	8.1	12.9	11-15
STUDEBAKER				
Hawk Coupe				
210 hp, Manual	4.5	7.0	10.6	13-17



Lube points on the Ford are sealed at factory with special grease compound that allows an interval of 30,000 miles between lubrications.



A sometimes-ignored entry in the low-priced field is the sporty Studebaker Hawk. A deluxe interior is one of its more interesting features.

a smooth, brisk performer that delivered better-than-average figures for both acceleration and economy. The 305-hp engine is particularly well suited to the three-speed automatic; it is powerful enough that the transmission's efficiency is put to good use, yet flexible enough that it does not cause abrupt shifts the way the hotter options are apt to do.

The ram-inducted 330-hp unit was tried with a manual gearbox, since its performance with Torqueflite was already known. Surprisingly, acceleration with the stick is actually a bit slower.

One reason for the difference was the rear axle, which was not properly geared for the power train and did not have a limited-slip differential. Excessive wheelspin occurred during any acceleration attempt from a standing start.

Still, the 330-hp Plymouth is an outstanding performer and one which delivers its punch without demanding an exceptional amount of fuel.

Plymouth is noted for its handling stability at all road speeds. The car holds an accurate, steady course on fast straights, corners beautifully and maneuvers precisely, all an added safety factor when as much as 330 hp is under the hood. Though the torsion bars attached to the front wheels usually get the credit, well-planned geometry throughout the suspension system and relatively stiff spring rates are the real reasons.

Adding to the excellent feel of control is the light, quick power steering characteristic of Chrysler products. It is almost too light, in fact, and takes some getting used to before it can be used to full advantage for vigorous cornering.

Compared with other cars in its class, Plymouth has rather firm riding qualities. Except on extremely rough surfaces, however, the car seldom reacts harshly to road shocks. And at high speeds, it is decidedly more comfortable than most of its softly-sprung competitors.

Plymouth has an ornate interior with such features as an oddly-shaped housing for the speedometer above the main dash panel and, optionally, a square steering wheel. The upholstery tends to be flamboyant, an effect augmented by the liberal use of extra bits of trim.

Seating is comfortable, though marred by a peculiar Plymouth characteristic. At the base of the front seat back is a rigid frame that is thinly padded and can cause a sore spot in a tender section of the anatomy during an all-day drive. Strangely, this problem is not noticed on other Chrysler products.

Plymouth manufacturing quality shows some improvement this year but is still not up to the standard of its price class.

DART

The hottest acceleration and the lowest fuel consumption among the big V-8's for 1961 were both recorded by Dodge Darts. Of all the full-sized cars tested, one Dart posted the quickest 0-60 time and the other the best mpg figure.

Both test cars represented the top-of-the-line Phoenix series. Other Dart offerings are the Seneca at the bottom of the price scale and the Pioneer in the middle.

The Dart's list of engines has become even more complex than Chevrolet's and includes several announced since MT first tried the 1961 model. The smallest V-8, displacing 318 cubic inches, is offered in ratings of 230 and 260 hp, and next is a 361-cubic-inch unit of 305 hp. Then comes a 383-cubic-inch in a choice of 325, 330 and 340 hp and, finally, a huge 413-cubic-inch with either 350 or 375 hp.

To complicate matters further, the 330- and 375-hp engines are both available in two separate versions, one with ram induction and the other a log manifold.

MT's hot Dart had the 330-hp ram unit and was all *go*. On the basis of its performance against the clocks, it is a bit frightening to contemplate the potential of the 340-, 350- and 375-hp options!

Actually, the normal ram induction engine is at its best in low- and middle-rpm ranges. At the end of a quarter-mile drag, its acceleration tapers off because the resonating pulse in the manifold is out of phase with the high engine speed. But when it hits, it hits hard. On the highway, for example, it provides enough power for passing without a downshift.

Yet it is not an exceptionally thirsty powerplant. Mileage

was slightly better than normal for a unit of its power.

But the car that really scored for economy was the 230-hp Dart. It turned in fuel consumption figures that started where some of its competitors left off. And it was a good performer as well, turning in an above-average 0-60 time for the smallest V-8 in a low-priced line.

One of the secrets of the Dart's efficiency is Torqueflite, Chrysler Corporation's superb automatic, which was fitted to both test cars. Consisting of a torque converter and three-speed gearbox, it is available with any Dodge engine.

Powerflite, a two-speed automatic, and a three-speed manual are also offered for the 230-hp engine and a heavy-duty, three-speed manual can be supplied with any of the bigger engines, from 305 hp up.

With the same chassis components as the Plymouth, the Dart is an equally fine-handling car and joins its corporate brother at the head of its price class. Springing is relatively firm, however, and does not provide riding qualities that will satisfy all tastes.

Both test cars were finished in a pleated vinyl with a conservative but luxurious appearance. Seats are well off the floor and provide very comfortable positions. The padding seems harder than normal at first but provides very good support on long trips. A higher seat back is featured for the driver and adds to his comfort during long stretches at the wheel.

The needle-type speedometer is in clear view at the top of the dash, but auxiliary instruments are buried in the lower part of the panel. Everything but an oil pressure gauge is included.

The only serious fault of the Dart is its quality of assembly. Many little details reflect careless workmanship. This is a problem which has plagued Chrysler Corporation for some years and is not yet solved. It is unfortunate because the car is exceptionally good in so many other respects.

RAMBLER

The Rambler Classic is the smallest big car or the biggest small car, depending on one's point of view. But there is little doubt concerning the Ambassador. Though it has the same body as the Classic, its added length definitely places it in the full-sized category. Both series are available with varying degrees of trim, called Deluxe, Super and Custom.

Powering the Classic V-8 is a 250-cubic-inch engine that comes with either 200 or 215 hp while the Ambassador's longer hood houses a 327-cubic-inch unit in a choice of 250 or 270 hp.

MT checked both Classic options, the 200-hp with an automatic transmission and the 215-hp with a manual, and an Ambassador with a 250-hp automatic power train.

All three cars performed remarkably alike, scoring 0-60 times within a 1.3-second spread, and showed themselves on a level with smaller V-8's offered in other low-priced lines. They were similar in fuel consumption, too, though the bigger, heavier Ambassador naturally was thirstier than the Classics.

Rambler's gearing options, manual, overdrive and automatic, are available with any of the four power ratings. The automatic is a torque converter combined with a three-speed box and, like those offered by Ford and Studebaker, is a Borg-Warner product. Among its unusual features in Classic and Ambassador installations is pushbutton gear selection. The neutral control also operates the starter and, below the main cluster of buttons, there is a separate parking "gear" switch.

The big Ramblers are softly-sprung cars designed for maximum comfort and have excellent riding qualities. The four coil springs soak up the irregularities of almost all road surfaces and, even in the relatively short Classic, there is very little fore-and-aft pitching.

Cornering is impaired by the body sway the soft suspension allows, and on really fast turns, the front end tends to wallow and drift off course. The latter problem seems at least partly due to the weight of the V-8 engine, though, since the Classic Six has been found to be a steadier handling car.

Better-than-average height is put to good use inside the Rambler. The distance between the floor and ceiling is more than enough for both high seats and ample headroom. As a result, the driver sits erectly in a position that affords a good view of the road while passengers have room to stretch.

Both materials and finish are of a very high order for a car in the Rambler's price range. A new touch for 1961 is a molded, acoustical fiberglass ceiling, which outdoes fabric types in both durability and sound-deadening qualities.

Dash arrangement is conventional, with the instruments centered in front of the driver. The glove box door has a finger tab below the button that eliminates the awkward procedure of pressing the button to release the latch, then removing one's hand quickly to let the door drop open.

The trunk layout is excellent. The compartment itself is well proportioned and illuminates when it is opened, whether or not the car's lights are on. Best of all, the lid extends clear to bumper level so that cargo can be loaded with a minimum of lifting.

STUDEBAKER HAWK

Over the years, Studebaker has gradually refined the Hawk into an appealing car that combines pleasure and practicality in one package. This year, for example, new sporting flavor is added with bucket seats and an optional four-speed gearbox.

The Hawk is available in only one body style, a club coupe, and with only one engine, a 289-cubic-inch V-8. There are two output ratings, however — 210 and 225 hp.

MT tested a 210-hp, four-speed Hawk and found it a lively yet economical car. Performance was above average for a low-priced V-8 and, because of short valve timing, the engine is extremely flexible. It will push the car beyond 50 mph in first gear, yet accelerate smoothly from below 15 mph in fourth. In other words, the Hawk tolerates a variety of driving.

Those who do not care for the four-speed transmission can opt for a three-speed manual, overdrive or a three-speed automatic built by Borg-Warner and similar to the unit used by Ford and Rambler.

For all its accelerating ability, the Hawk was also notable for moderate fuel consumption. It rates among the better low-priced cars in this respect.

The Hawk's performance is complemented by very good suspension, one of those rare systems that provide control without sacrificing comfort. Cornering becomes a problem only when a turn is extremely tight. Then the relatively long wheelbase can be awkward to handle, and a slight nose heaviness causes the front end to plow. Generally, though, a capable driver can get a Hawk down a winding road much faster than he could several makes with much more horsepower.

From a comfort standpoint, the wheelbase is an advantage. There is little fore-and-aft pitching on even the roughest surfaces. Overall riding qualities tend to be firm but rarely harsh.

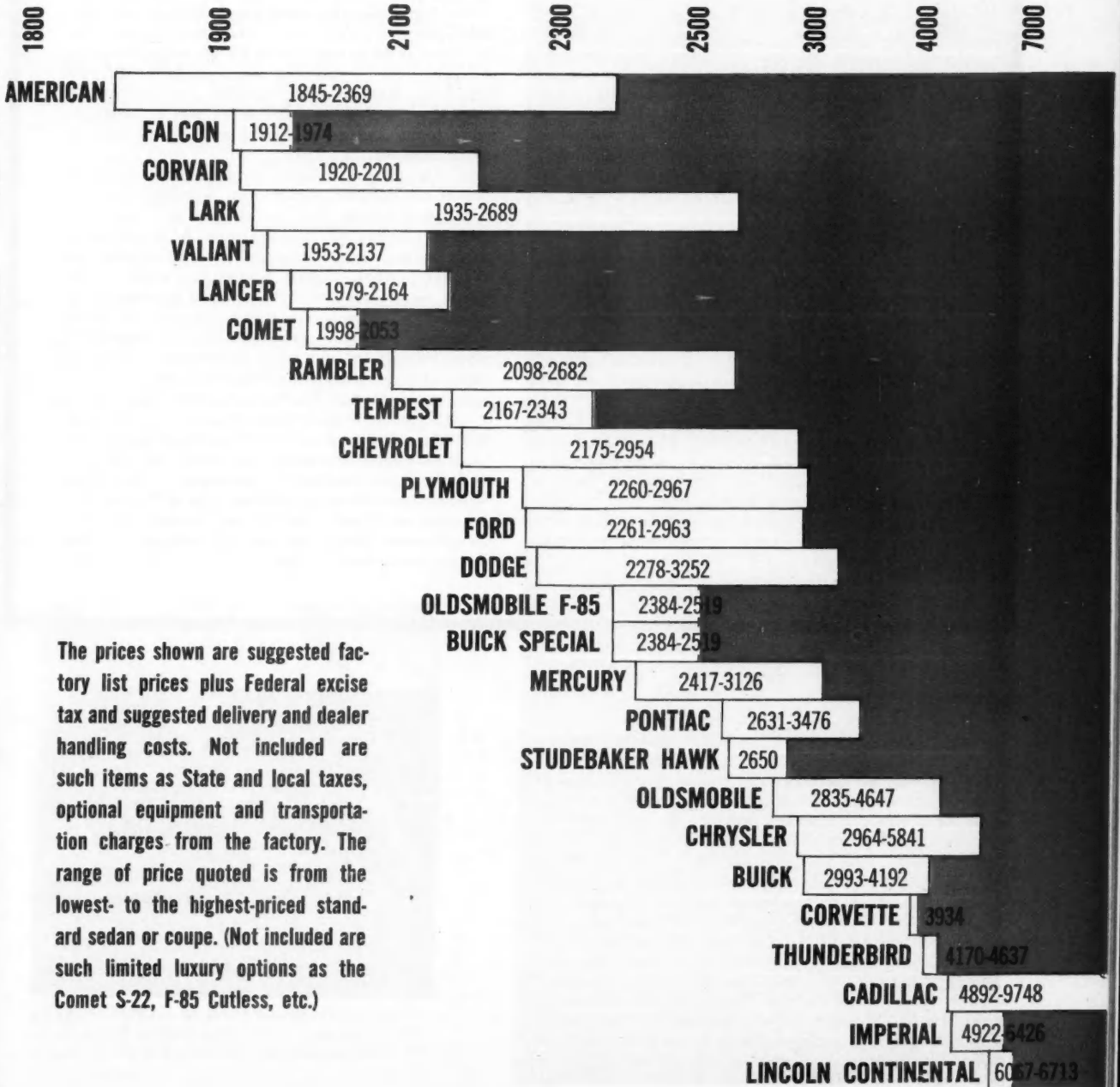
Highlighting the interior this year is a pair of bucket seats in front. Carefully contoured, they are padded firmly but comfortably. Reclining backs are available and recommended; the normal angle is too erect for some tastes. The rear compartment offers room for two adults or three children.

The dash is one of the best to be found in a current U.S. car and features a complete set of instruments. Honest, round dials indicate not only speed and fuel level but also replace warning lights so often used to show temperature, oil pressure and generator charge. Appropriately enough with a four-speed box, a tachometer is available as an extra.

There are a couple of minor flaws in the cockpit. A driver new to the car tends to trip his foot on the steering column as he moves from the throttle to the brake and, when the car is parked in reverse, the emergency brake handle collides with the gear lever.

Studebaker assembly quality is generally high, and the Hawk deserves to be rated as one of the better-built cars in the low-priced field.

1961 NEW CAR PRICES



The prices shown are suggested factory list prices plus Federal excise tax and suggested delivery and dealer handling costs. Not included are such items as State and local taxes, optional equipment and transportation charges from the factory. The range of price quoted is from the lowest- to the highest-priced standard sedan or coupe. (Not included are such limited luxury options as the Comet S-22, F-85 Cutless, etc.)

THE COMPACTS

GREAT VARIETY MAKES CAREFUL STUDY A MUST FOR POTENTIAL BUYERS

by Bob Ames

WITH THE ADDITION of Buick, Dodge, Oldsmobile and Pontiac, the compact class has grown to 10 different lines. This, plus the many variations in engineering, passenger compartment layout, handling and luggage capacity, makes it far more important that the person who intends to buy a compact car be well informed.

Only in the compact class are such innovations as independent rear suspension, transaxle, rear-mounted engine or a curved driveshaft available. And also in this class is the biggest assortment of basically different, even radical, engines.

If the prospective buyer isn't perplexed by this vast array of engineering choices he may easily be confused by trying to pin down the differences in the non-identical, mechanical twins found throughout the compact class. The Falcon-Comet and Lancer-Valiant lines have virtually identical mechanical components; the Special and F-85 very similar engineering; and the Special, F-85, Tempest and Corvair all share the same body shell.

Sometimes the differences between these close relations are mainly styling, as in the case of the Valiant and Lancer. Or the changes may be more extensive, as with the Falcon and Comet, where quality, handling and ride differ, as well as styling. In other lines the difference may be a few engineering features, as in the Special and F-85, or radical changes, as offered in the Corvair or Tempest.

Differences like these between individual lines can make it difficult enough for the average individual. But the choice is made even harder by the many variations of power train options that can greatly alter the performance or economy of an individual line. For instance, Studebaker's Lark is available in at least a dozen different forms, and no two combinations will perform exactly the same.

For the person seriously interested in a compact, there is one point of reference that is actually quite obvious but so simple that it is often overlooked. When possible, compare the compact with the standard-size car in the same line. For example, the Buick enthusiast will feel perfectly natural behind the wheel of the Special on the open road, because the compact drives and feels considerably like a bigger Buick. This seems to be partly because of pet theories of the engineers and partly because the automatic transmission is usually scaled down from the line's standard-size unit.

To be able to make an intelligent choice of a compact it is wise to know the fundamentals of the basic design of all the cars. In this review the important differences are brought out. Comparisons are made when appropriate between the compact and standard-size stablemate, between the corporation compact twin if there is one, and between the other cars in the compact class. It is the only way a person can arrive at a decision as to what compact car is best for him.

BUICK SPECIAL

Buick's Special is no longer merely a low-priced version of the big Buick, as it was a few years ago. Now the Special is a compact with an altogether different design that is lower, narrower and shorter than a standard-size Buick. Interior space is not as generous, the engine smaller, the price lower and operational expenses are less.

The Special's aluminum V-8 has an excellent balance between performance and economical operation. Both the manual and the automatic version recorded nearly equal acceleration; the final figures rated about normal for V-8 compacts. There was a significant difference between the two cars in economy, with the manually-equipped turning in the better mpg figure.

In handling, ride and general feel the Special is undeniably a Buick. Nearly every category of handling was judged above normal for V-8 compacts and very near the top of the Special's class. Buick has always emphasized an excellent ride at highway speeds, but secondary road behavior and handling have suffered to a certain degree. The Special has Buick's well-known good

Special, F-85 and Tempest windshield wipers have big, overlapping pattern which clears a large glass area for excellent driver vision.

high-speed ride but is far superior to the bigger line in every other handling characteristic. Cornering is fast, flat and firm, and rough road stability is excellent. Steering is relatively slow, and long trips over winding roads could be fatiguing.

Except for the obvious external measurements the passenger compartment has the most striking differences between the compact Special and the standard-size Buick. The Special is approximately two feet shorter, seven inches narrower and four inches lower. Yet, it has only .5 inch less headroom, .5 inch less legroom and 4.7 inches less hip space. Seats are thinner and firmer, but for practical purposes long trips in the Special will be almost as comfortable as in the big Buick. The Special's trunk has 2.2 cubic feet less cargo space than the bigger Buick.

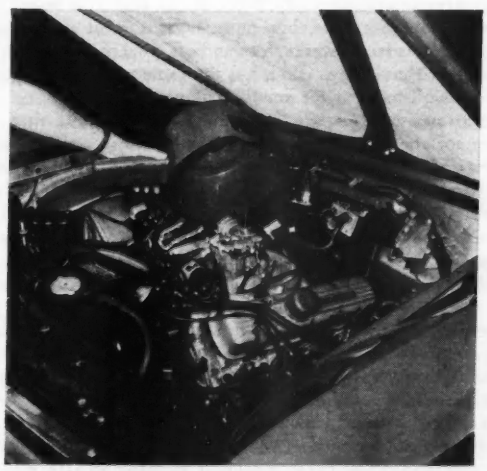
Although its price tag is higher than some compacts, Buick's Special would rate very near the top of the compact class in overall design. It is truly one of Detroit's better compacts.

OLDSMOBILE F-85

Except for its physical dimensions the F-85 will be no stranger to Oldsmobile drivers. This compact drives, handles and reacts much like its bigger companion line. Part of this similarity is undoubtedly due to its Hydramatic transmission, but more reasons can be found throughout the car in engineering theories long favored by Oldsmobile engineers.

Acceleration was on a par with most moderately powered, standard-size cars and considerably better than six-cylinder compacts. The difference between the manual shift and the automatic in performance was negligible, due mostly to a compensating axle ratio. This also leveled off comparative passing reserve in mid-range speeds, and both versions rated slightly above average. Mileage varied more, and the automatic scored in the normal range for V-8 compacts, with the manual finishing near the top of the same class. Numerically, the axle ratios for the manual seem to be a trifle low, and at lugging speeds down-shifting occurs more often than should be necessary.

Handling characteristics were considerably above average for compacts but still rated less than superior. Cornering is fairly flat, diving from rapid deceleration, and squat from acceleration almost non-existent. Yet all these qualities could probably have been improved by firmer springing without the ride suffering. Steering has not been reduced in the same proportions as have external measurements, and the slowness hinders parking lot



Bonnet-type air cleaner was introduced on F-85 but discontinued due to technical difficulties with completely enclosed carburetor.

CAR	0-30	0-45	0-60	Gas Mileage
AMERICAN				
Super Sedan 90 hp. Automatic	4.5	9.6	16.0	21-25
Custom Sedan 125 hp. Manual	5.1	9.7	16.0	21-25
BUICK SPECIAL				
Sedans 155 hp. Manual 155 hp. Automatic	4.1 4.5	7.9 7.9	11.7 12.5	16-20 14-18
CORVAIR				
Monza Coupes 80 hp. Automatic 98 hp. Manual	6.8 3.4	12.1 7.5	21.3 13.2	19-23 17-21
COMET				
Sedan 101 hp. Automatic	5.2	9.1	15.6	18-22
FALCON				
Sedans 101 hp. Manual 101 hp. Automatic	4.3 4.8	8.2 8.8	14.3 15.2	21-25 19-23
LANCER				
Sedans 101 hp. Manual 145 hp. Automatic	5.3* 4.5	9.2 8.4	16.8 14.4	19-23* 17-21
Hardtop 196 hp. Manual	3.6	6.1	9.6	12-16
LARK				
Regal V-8 Sedan 180 hp. Manual	3.7	6.1	10.1	16-20
Cruiser V-8 Sedan 210 hp. Automatic	3.8	6.4	9.8	12-16
Regal 6 Hardtops 112 hp. Manual 112 hp. Automatic	4.9 5.9	9.0 10.4	15.2 17.8	18-22 19-23
OLDSMOBILE F-85				
Sedans 155 hp. Manual 155 hp. Automatic	4.5 4.5	7.4 8.2	11.9 12.7	17-21 14-18
TEMPEST				
V-8 Sedan 155 hp. Automatic	3.9	7.0	11.8	14-18
4 Sedans 110 hp. Manual 155 hp. Automatic	4.2 5.0	8.4 8.7	14.0 14.2	16-20 14-18
VALIANT				
Sedan 101 hp. Manual	5.0	8.9	16.7	19-23
Hardtop 101 hp. Automatic	5.5	9.5	16.1	18-22

maneuvers. The F-85's ride is above average for its class and not too much below the bigger Oldsmobile in overall comfort.

Inside, passengers are seated comfortably, although it is a trifle snug for six. Upholstery padding is thinner and firmer than on the big Oldsmobile, but generally speaking, overall comfort is at a good level. Detail design and finish quality on the inside are considerably lower than the standards of the standard-size line.

Overall, the F-85 has a good basic design, well suited for all normal driving purposes, with moderate comfort, performance.

TEMPEST

Pontiac's Tempest is the most novel compact introduced this year. Along with its engineering innovations it has a set of characteristics that is certainly individualistic in the compact class.

True to Pontiac's big-car image, the engine and power train variations make a long list, including five versions of the Slant Four and two of the aluminum V-8, manual and automatic transmissions and several axle ratios. With several test cars represented, this makes a varied list of performance and economy figures. Generally speaking, performance rated among the hotter compacts, while mileage was less when compared to the more economical ones.

The Tempest's engineering innovations are pretty well known by now: briefly, they are engine in the front, a curved driveshaft, transaxle assembly and independent rear suspension. This gives the compact several traits quite unlike the more conventional Detroit cars.

Pontiac's compact leans toward stiffer suspension with a slightly firmer ride. This firmness adds to high-speed stability and is neither unpleasant nor uncomfortable. Handling is excellent up to a point. Cornering, for instance, is flat, and the Tempest will go through a sharp corner fast and precisely. But pushed beyond its normal limits, the car develops oversteer quickly and might surprise a driver not accustomed to the natural characteristics of i.r.s.

Inside, the compact scores high for overall passenger comfort. Although its physical dimensions are practically equivalent to most other cars in its class, the Tempest's biggest advantage is gained through its exceptionally low transmission hump.

Of course, the Tempest shares its body shell with the Corvair, F-85 and Special, but even with its transmission mounted directly under the trunk it loses little cargo capacity to its compact V-8 competitors. Overall, the Tempest's trunk is slightly above average for the compact class and is practical for loading. Quality and materials inside the Tempest are only average for compacts.

CORVAIR

There is no American car like the Corvair. With its engine and transmission in the rear and trunk in the front, Chevrolet's compact has advantages and disadvantages that are truly its own.

The Corvair is powered by a unique, flat-opposed six-cylinder engine offered in two ratings, 80 hp and 98 hp. There was considerable difference in the way the two powerplants performed. The 98-hp Six, with a four-speed manual transmission, turned in acceleration figures almost the equal of the average for V-8 compacts, while mileage results were in the low range for compacts. With the smaller engine and an automatic transmission, acceleration was the poorest of the compacts, but the mpg figure took a decided upswing.

Next to its engine, the Corvair's most unusual feature is its independent suspension on all four wheels. This system makes a very noticeable difference in the way the car handles. For all normal situations the Corvair is easy to drive, with an excellent ride and good handling. But driven too fast on a rough road, the compact has a marked tendency to pitch. Another peculiarity becomes evident when cornering. Taken quickly into a hard corner, the rear wheels literally turn themselves and a quick-occurring oversteer becomes noticeable. This is a natural characteristic of i.r.s. and is not actually a defect. Most drivers quickly become accustomed to it and correct automatically.

The Corvair's front seat is excellent for two and snug for three, although the near-absence of a transmission hump makes middle-passenger comfort more tenable. The back seat is even more cramped. In the popular Monza coupe body style, the front seats are semi-bucket and their individual comfort for a single passenger is superb.

As a fun-to-drive car, there are few compact that even come close to equalling the Corvair. It is also excellent for around-town shopping trips and driving to and from work. For serious family use, and long trips, below-average accommodations for six and curtailed luggage space place limitations on its usefulness.

COMET

For a car that could easily have been overshadowed by the Falcon, the Comet has been conspicuously successful in its own right. It might be hard for a casual observer to track down the basic reasons for this popularity, but they are becoming more evident. Obviously, many drivers of compacts want more than simple economy. Even for a smaller car they are willing to pay a higher price to get more quality, a slightly better ride and distinctive styling.

The Comet is available with two powerplants; both are identical to their Falcon counterparts. With the bigger engine and a two-speed automatic transmission the performance has been significantly improved. Not only is this true in standing-start acceleration but in mid-range passing ability. In this respect the Comet is average for the compact class and, despite its heavier weight, almost equal to the Falcon.

The extra poundage begins to tell in gas mileage, however, and with equivalent power trains the Comet will be about two to three mpg poorer than its compact cousin. But when rated in the overall compact field, the Comet ranks well among the better economy cars.

One of the fundamental differences between Falcon and Comet is size. With its greater length and wheelbase, the Comet has a few advantages — and very few disadvantages. Perhaps one way to explain the particular appeal of the Comet is that it closely resembles the traditional six-cylinder cars before growing size and horsepower corrupted their original purpose.

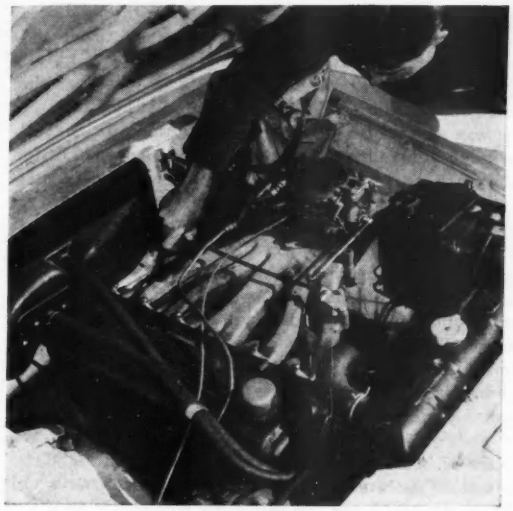
The extra wheelbase pays off for the Comet in a better ride — partly at high speeds, but more noticeable at slow speeds over uneven surfaces, where fore-and-aft pitching is much less pronounced. Handling is good, but the Comet does not have the nimbleness of many of the smaller compacts.

Interior passenger space is slightly less generous than the average for the compact class as a whole but in no way limits comfort for four passengers, although six might find it rather crowded. Overall quality throughout the car would compare favorably with the best in the compact class.

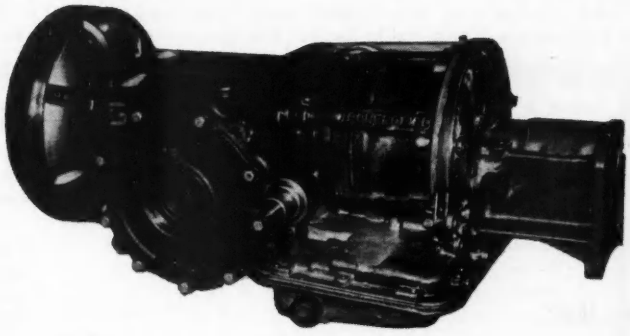
FALCON

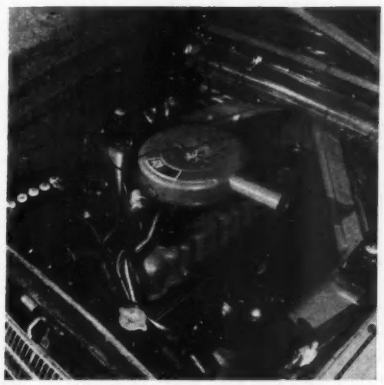
The Falcon lacks the scaled-down big-car characteristics of many compacts and the technical novelty of others. Instead, it is a straightforward example of conventional light-car design. There are few changes in the 1961 model, and these are mainly modifications and refinements of existing features.

The most important development is the optional powerplant. Now displacing 170 cubic inches, it is rated at 101 hp. This added power is transformed into better performance and slightly — but only slightly — curtailed gas mileage. Powered by this engine, both the manual and automatic versions sliced nearly six seconds off the 0-60-mph acceleration runs and greatly in-



Four-barrel ram tube option for Lancer's 225-cubic-inch Six, left, was the hottest compact tested. Low transmission hump in Tempest is direct result of transaxle, below, with its curved driveshaft.





Falcon and Comet share this engine. Although conventional by compact standards, its economy is excellent.

Best rear seat in the compact class is found in Lark Cruiser, which has more legroom than some big cars.

Corvair's front luggage compartment is more practical and spacious with spare tire stored in the rear.

creased mid-range passing reserve. This is a definite improvement, since the most frequent criticism last year was lackluster performance. The sharp increases in power were gained without much sacrifice in gas economy. The final figures for the manual were rated with the best in the economy field, and the automatic also scored high.

Riding qualities are excellent as long as the road surface is smooth and suffer less over rough surfaces than do many compacts. To reduce harshness, spring rates are a bit softer this year. On the open road the car has a quiet, stable ride, disturbed only by a slight sensitivity to cross-winds. General handling, which was always good, has not diminished through the softening of the ride. Cornering and stability in most situations are above average.

The Falcon steers with a positive, direct road feel at highway speeds. When parking it is apparent that the system does not have a power assist, but control is still light enough that power is neither necessary nor offered.

The Falcon has a strictly Detroit concept for its interior — the bench seats are high, the seats firm, and overall comfort is above average for four persons but crowded for six. Entry and exit are excellent, even on two-door models. Trunk space is about average for the compact class, and accessibility is good.

There are compacts that can do a specialized job of transportation better than the Falcon, but few in its price class come close to its record for all-around purposes.

LANCER

Although virtually identical in engineering to the Valiant, Dodge's Lancer has several subtly different physical variations. From the outside and to a lesser extent, inside, the Lancer is more conservative than Plymouth's compact. But alongside nearly any other compact car, the Lancer is anything but conservative, and engine options range from unassuming economy to a fire-breathing Six that turned in the fastest acceleration runs recorded during MOTOR TREND's testing program of 23 compacts.

In its milder forms the Lancer accelerates and performs moderately well for the 170 and excellently for the 225-cubic-inch powerplant. Gas mileage with these engines is average for the compact class.

In the power-pack 225 version, the Lancer becomes exceptionally potent and even bested the compact V-8's in the 0-60-mph acceleration tests. Driving through a manual transmission, the mileage was creditable and far better than that of many full-size V-8's which turn 60 in less than 10 seconds.

Dodge's compact has the most impressive and desirable over-

all handling characteristics of any compact. On the open road it stays where it is steered, with virtually no tendency to wander. The ride is pleasantly firm, and the chassis recovers quickly and well from dropping into sharp dips or rising over a steep crown. At slow speeds over rutted or bad surfaces, the Lancer is a little harsh. As the speed increases, this harshness soon disappears and the ride becomes controlled.

Inside, headroom in front is generous, and all except extra-tall individuals will be seated in comfort. Entrance or exit ease is only average for the compact class, although the doors swing to almost right angles, greatly facilitating either operation if the Lancer is not parked close to another car. The back seat also has ample headroom but long-legged persons might be uncomfortable over long trips, especially if the driver has the front seat in full-back adjustment.

The Lancer is a many-sided compact, offering either moderate performance with moderate economy for normal driving, or sizzling performance with comparatively good mileage.

VALIANT

Plymouth's Valiant had few changes at the beginning of the 1961 model year. Later, Valiant introduced its first major refinement, the 225-cubic-inch Slant Six that is also standard in the Plymouth. Testing was completed before the first 225 versions were available, but the figures for a Lancer with an identical powerplant listed in the specification box will be reasonably similar.

The 1961 Valiant standard 170-cubic-inch Six has only one significant difference, a lower compression ratio. This makes the engine a little more tolerant of low-octane fuel but has practically no measurable effect on performance or economy. Acceleration is moderately good for the compact class, and mid-range passing power with the automatic transmission is well above average. The manual is just a shade above the automatic in economy, with both cars falling a little closer to the average for the entire compact class.

Road behavior is one of the Valiant's most valuable assets and it ranks among the best of the compact class; some qualities, like cornering, are near the best when all domestic cars, regardless of size, are included. Corners are taken flat with little tire squeal at speeds considerably above normal. Stability is excellent on tight corners or on the open highway. Bounciness is well controlled, although the compact does tend to be a little harsh over secondary roads at slower speeds.

Inside, the passenger compartment is relatively unchanged. Six persons can be seated in moderate, but not the best of comfort. Headroom is generous and legroom ample, although the back seat tends to cramp long legs if the front seat is in full-back adjustment. The seat padding is firm but has an excellent comfort factor, especially on long trips.

Valiant would score very high when judged against any other domestic car for overall design. Unfortunately, in detail design and quality control, this isn't always so true. The glove compartment is a good example. A bin-type arrangement, it is bigger than that of many full-size cars, but it opens with a push-button latch extremely difficult to operate.

AMERICAN

Rambler's American has all-new sheet metal this year. This is significantly unusual, for the American has customarily been one of the least changed cars each year. But its many familiar characteristics have not been lost.

The American has two powerplants: one the long-standard 90-hp Six, the other, Rambler's 125-hp ohv Six, was introduced in mid-1960 and has not been tested in an American previously. As might be expected, the acceleration is considerably improved. Not so easy to predict was that the 0-60-mph time would be identical for the two cars. This unvarnished figure obscures the fact that mid-range acceleration is far better and passing reserve greatly improved.

Another assumption which also proved true was that the mpg figure would drop. Mileage is down a shade, but the difference was not worth recording. The American is still one of the most economical of all domestic-made sedans to drive.

Roadability in the American in the past has been better adapted for around-town driving. This year the car seems to have a different feel. The best example of this comes at fast speeds on the open highway, where the car is fairly stable and gives a good ride — something which couldn't always be said for previous models. Steering is responsive, and the car will out-maneuver practically any other domestic car in a parking lot. This isn't so much due to the steering but to the smaller dimensions of the American.

One thing that hasn't changed is the general layout of the passenger compartment, which is one of the poorest for overall passenger comfort of any compact. Four and sometimes five persons can be seated with average comfort, but rarely six. The rear seat is the worst offender. Here the wheel wells encroach on bench width and reduce it to two-person capacity. Legroom in front is ample, although full-back adjustment of the seat severely limits rear legroom. Headroom is excellent, according to the dimensions, but suffers from a rather curious flaw. The roof with its sloping sides causes both head-and shoulder room to be restricted.

Even though the American is the smallest domestic car, it still has one of the best trunks in the compact class.

LARK

Without changing much on the outside, the 1961 Lark is undoubtedly the best compact that Studebaker has produced. With a proven V-8 and a new ohv Six, the line has more than a dozen power trains to greatly alter performance and economy.

With four different versions represented, the variations in performance ranged from the hottest of the V-8's to moderate acceleration for the new Six. In economy each power team was near normal for its performance and classification. One interesting fact was that the manual-transmission V-8 showed a sharp improvement over the Six in performance, while the corresponding drop in mileage was not too bad — in fact, in some instances the V-8 may get an even better mpg figure.

The Lark's new Six is a tremendous improvement over last year's version in quietness, performance and economy. But an even more striking change in this year's Lark is the way the car handles overall. The biggest upgrading is in steering, which has been sharply criticized in past years. This year Studebaker re-engineered the steering and actually reduced turning effort by nearly one-third. The change is quite noticeable, and with no loss in high-speed precision the Lark now maneuvers at slow speeds easily.

Cornering in the Six has also been greatly improved and corners can be taken faster with less lean and little squeal. At high speeds the ride still tends to be soft, but a new element of stability has been introduced. The overall ride of any Lark is the equal of any car in the compact class.

Interior space is more than ample and passenger comfort is above average. This is due partly to higher seat benches and a good attitude of the backs. Six persons can be seated in moderate comfort without too much crowding. The back seat is particularly good for the compact class, and the new body style introduced this year, the Cruiser, has exceptional legroom for rear seat passengers, even equalling many standard-size sedans. The quality of the Lark's interior is somewhat better than normal for the compact class. One of the compact's less desirable features is its trunk, which is below the compact average for convenience and carrying capacity.

THE MEDIUM-PRICED CARS

MORE ALIKE THAN ANY OTHER CLASS, THESE CARS DIFFER IN A MOST UNSPECTACULAR WAY

by John Lawlor

THE DIFFERENCES found in the medium-priced field are probably harder to define than those in any other group of cars. All six makes are smooth, quiet, luxurious and relatively powerful.

That, some critics argue, is why the class as a whole is not attracting the interest it once did. Each make is too much like its competitors to have much individual appeal. By way of comparison, substantial variations are found in the compact, low-priced and luxury fields.

Yet there are important distinctions. Chrysler and Oldsmobile, for example, build entirely different kinds of cars. One is a superb highway machine, powerful and easy to handle at speed, while the other is a softly-sprung town carriage for sedate, elegant transportation.

These examples are extreme, to be sure, but they point out that, alike as the medium-priced cars may be, they are not all intended for the same jobs. The series of reports that follow describe the strong features of each make, so the prospective buyer can tell which is best for his specific needs.

Though still big and powerful, even the medium-priced cars reflect the general trend to reduced size and greater economy. Buick, Mercury, Oldsmobile and Pontiac are all shorter and narrower this year; Chrysler, Dodge and Mercury have cut prices; and all six are now available with lower-compression engines for use with regular fuel.

Dodge and Mercury, in fact, have all but deserted the field. Each continues to offer a series in its traditional class but is concentrating its attention on lower-priced versions, competing against Chevrolet, Ford and Plymouth. The other medium-priced makes, however, still have three or four relatively expensive series.

Chrysler's policy is most interesting and, apparently, has paid off. The make is the least changed in the whole group this year, yet is the only one which has shown a significant gain in sales.

The principal reason is the new, less expensive Newport series. While mechanically similar to the big Dodge, it offers greater distinction for only slightly more money.

Chrysler officials have another theory for the product's current success. It is the only medium-priced car that has not lent its name to a compact. It retains the prestige of being a big car, even in its lowest-priced series. Today, when so many people are confused about what kinds of cars are being produced by what manufacturers, Chrysler's simple approach seems to have assumed new importance.

Still, prestige is an intangible factor. The points that can be measured are what really matter in the selection of a new car. Performance, roadability, comfort and quality are the aspects of design an owner has to live with. These are spelled out in detail for each medium-priced make in the following summaries of MOTOR TREND's 1961 road tests.

BUICK

A totally new chassis is featured in this year's Buick, with an "X" frame, redesigned suspension and triple-jointed, open driveshaft in place of the familiar torque tube. The result is smoother, steadier road behavior that adds to the make's highway potential without diminishing its luxury appeal.

The 1961 Buick was tested in two forms, the 250-hp Le Sabre and 325-hp Invicta. Another series, the Electra, has a longer wheelbase but is powered by the same engine as the Invicta.

Among the medium-priced cars, the 364-cubic-inch Le Sabre won top honors in economy and proved a moderately good performer as well. This same engine is available with an even thriftier 235 hp or a more potent 300 hp.

Rapid acceleration and reasonable fuel consumption were also well combined in the 401-cubic-inch Invicta. While one of the fastest cars in its field, it burned no more gas than the economy versions of several competitive makes.

Turbine drive is now standard in all series; there is no manual gearing option. An exceptionally smooth transmission, it consists of a variable-pitch torque converter and a two-speed gearset to provide low and drive ranges. Behind it is the unusual new driveshaft. Formed in two sections, the shaft has not only the customary universals at either end but a third, constant-velocity joint amidships to minimize vibration.

The new driveshaft is now exposed rather than encased in a torque tube, necessitating changes in suspension. Coil springs are retained but with a new system of control links. The new Buick corners faster and flatter than before and holds the road steadily at high cruising speeds. At the same time, spring rates are still soft enough to absorb rough surfaces easily. Other cars in the same class may be better on any one of these points but none can surpass Buick's overall balance of them.

Buick brakes continue to rate among the best to be found on any U.S. car. Their finned drums are engineered for fast cooling and, consequently, minimum fading.

With GM's other medium-priced products abandoning the "X" frame, it is surprising to find Buick embracing it this year. While extremely rigid, such a structure does not allow the interior roominess of a depressed front floor. Mid-seat footroom in front is restricted by the transmission hump and a bulky dash arrangement that looks like an embryonic center console. The rear compartment is spacious, though with deep floor wells.

The difference in price between the Le Sabre and Invicta is reflected in interior finish. Upholstery and trim in the Invicta are of a much better grade. However, no difference in assembly quality is evident. Both cars are built with exceptional care.

Buick continues to use a horizontal speedometer that is re-

flected into a mirror instead of being directly visible.

At the rear of the car, Buick has placed the fuel tank over the rear axle and lowered the trunk floor for more useful luggage space. The new compartment is both wide and deep.

OLDSMOBILE

Elegance is the theme of the 1961 Oldsmobile. Once noted for exceptional performance, the make now stresses smooth, quiet operation and luxurious interior treatment.

The two cars tested were a Dynamic 88 with 250 hp and a big 98 with 325 hp. Also available are the Super 88, combining the smaller 88 structure with the higher-powered engine, and the Starfire, a bucket-seated convertible based on the Super 88 but sporting 330 hp. All three power ratings are derived from the same 394-cubic-inch engine design.

Compared with the Dynamic 88, the 98 has more than enough extra power to offset its greater weight and is a full second faster in 0-60 time. Both cars have an edge on the acceleration of their 1960 counterparts but remain a bit under par for their class as a whole.

In fuel consumption, less than one mpg difference was recorded between the two. The Dynamic's only apparent advantage is that it will run on cheaper, regular gas.

Both test cars were equipped with the new three-speed Hydramatic, a simpler, lighter version of the popular automatic incorporating a modest torque converter in place of the old hydraulic coupling. As a lower-priced alternative, the 88's are also offered with manual transmissions.

Shifts in the new Hydramatic are somewhat more pronounced than in the previous four-speed design. They have the same smooth, almost slippery feel, however, blending well with the silky characteristics of the whole power train.

With a switch to coil rear suspension, riding qualities are a trifle softer but otherwise unchanged. The Oldsmobile is still one of the finest riding cars in the entire medium-priced field. On the highway, it is stable with little pitching or side sway and, at moderate speeds, its springs absorb all but the roughest surfaces.

Unfortunately, the emphasis on a good ride has more than an average effect on cornering ability. Tight turns cause an annoying degree of body lean and tire squeal. Directional control is good, however, thanks to GM's relatively quick and accurate power steering system.

Though the 1961 Oldsmobile is smaller than last year's, its passenger comfort is just as good, if not better. The "X" frame has been scrapped in favor of a box-shaped structure which, combined with the smaller Hydramatic housing, allows deeply recessed floors. Seat cushions are nearly chair-height for an extremely comfortable position.

Interior trim and upholstery tend to be ornate, even in the moderately-priced Dynamic. And the instrument panel is too self-consciously styled to be of maximum functional value. Materials are good, however, and assembly quality is outstanding.

Like Buick, Oldsmobile has relocated the fuel tank so the luggage compartment can be deepened. As a result, the useful trunk capacity is greatly increased.

PONTIAC

A dazzling variety of options enables the Pontiac buyer to build a car to his exact performance requirements. Ten standard engines, four transmissions and seven axle ratios make up the basic power trains.

The 1961 Pontiac comes in four series: Catalina, Ventura, Star Chief and Bonneville.

The 389-cubic-inch engine is available with horsepower ratings of 215, 230, 235, 267, 283, 287, 303, 318, 333 and 348, depending on variations in compression, carburetion and valve timing. And, if these aren't enough, the factory also authorizes parts packages that now raise output as high as 386 hp! These are specially installed by the dealer, however, and are not normally found on cars in the showroom.

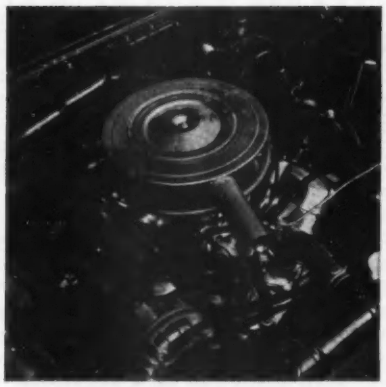
For a key to the powerplants that are used in each series and with particular transmissions, see the specification chart on page 79.

The two Pontiacs tested were standard Hydramatic combinations for their respective series, a 267-hp Catalina and 303-hp Bonneville. The first was average in both performance and economy, while the second was one of the fastest medium-priced cars tested, yet consumed no more fuel than normal for a vehicle of its power.

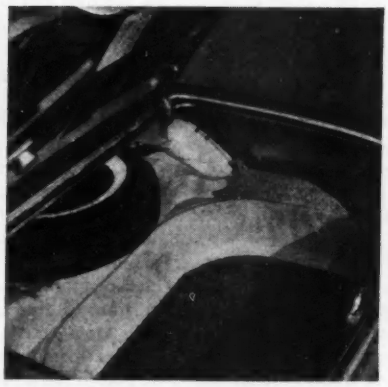
The transmission differed, though both were Hydramatic. In the Catalina and Ventura, the new three-speed version is used while the larger Star Chief and Bonneville retain the traditional four-speed. Both are smooth and responsive, though the older design seems somewhat more efficient.

All series can also be had with a three-speed manual, in either normal or heavy-duty form, as well as a four-speed manual.

Because of its shorter wheelbase, the Catalina corners some-



Chrysler Newport and Dodge Polara use same 265-hp engine. Alternator is used in place of old-style generator.



Oldsmobile is one of several GM makes now featuring recessed trunk space. Fuel tank is repositioned above axle.

Buick offers optional interior finish for its Invicta series with pleated upholstery, front and rear armrests.

what better than the Bonneville, but both cars have handling qualities near the best in their class. The power steering is lively and accurate, if a bit too slow for really fast corrections.

For all its handling stability, the Pontiac also rides comfortably. Soft coil springs absorb most road shocks with little noise or vibration. Superior handling and riding qualities can be combined largely because of the car's extremely wide tread. By spreading each set of wheels far apart, stability is improved without sacrificing low spring rates.

Pontiac has become an advocate of the box-shaped frame and takes advantage of it to provide a depressed floor. With seats about the same height from the ground as before, passengers ride more erectly and comfortably.

Interior fabrics are consistent with the car's price and appear both attractive and durable. Pontiac's assembly quality is on a par with that of its competitors but a bit below the usual GM standard.

While Pontiac does not have the lower trunk floor found in other GM makes this year, it still manages to provide a roomy, well-proportioned compartment. This is especially true of the big Bonneville, which puts its extra length to work as luggage space.

MERCURY

Conservative performance and a unique springing system are highlights of the Mercury Monterey for 1961. The car represents a complete change for Mercury, though its design is based extensively on the current Ford.

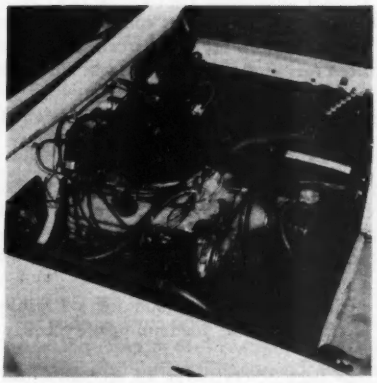
With the introduction of the Meteor 600 and Meteor 800, Mercury has dropped into a new price field and left only one series, the Monterey, in its traditional class.

The standard powerplant is a 175-hp, 292-cubic-inch V-8, lowest-powered engine in any medium-priced car. As tested, it was the mildest performer in the group though, surprisingly, only slightly better than normal in fuel economy. Mercury's hottest option, delivering 300 hp and displacing 390 cubic inches, was also tried but scored just average figures for both acceleration and fuel consumption. Between the two extremes, there is also a 220-hp, 352-cubic-inch unit.

Fitted to both of MT's Montereys was Mercomatic, Mercury's adaptation of the familiar, reliable Borg-Warner automatic. It consists of a torque converter and three speeds. A conventional manual and two-speed automatic are also offered.

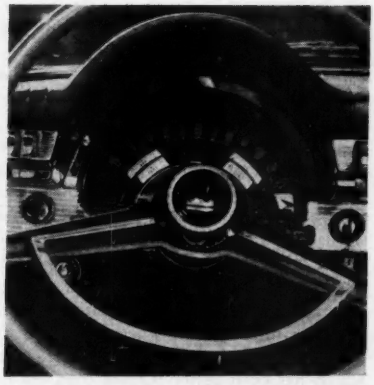
Mercury shares several 1961 innovations with Ford, notably

CAR	0-30	0-45	0-60	Gas Mileage
BUICK				
Le Sabre Sedan 250 hp, Automatic	3.9	7.1	10.6	14-18
Invicta Hardtop 325 hp, Automatic	3.4	5.6	8.8	12-16
CHRYSLER				
Newport Hardtop 265 hp, Automatic	3.5	6.4	9.6	12-16
New Yorker Sedan 350 hp, Automatic	3.9	6.6	9.8	10-14
300-G Hardtop 375 hp, Manual	3.5	5.4	8.3	9-13
DODGE				
Polara Convertible 265 hp, Automatic	3.8	6.3	10.1	11-15
Polara Hardtop 325 hp, Automatic	3.6	5.7	8.9	10-14
MERCURY				
Monterey Hardtop 175 hp, Automatic	5.4	9.0	14.5	12-16
Monterey Sedan 300 hp, Automatic	4.2	7.0	10.2	10-14
OLDSMOBILE				
Dynamic 88 Hardtop 250 hp, Automatic	4.2	7.4	11.5	10-14
98 Hardtop 325 hp, Automatic	4.0	7.0	10.5	10-14
PONTIAC				
Catalina Hardtop 267 hp, Automatic	3.5	6.5	10.2	11-15
Bonneville Hardtop 303 hp, Automatic	3.3	5.7	8.8	10-14



Pontiac's 389-cubic-inch engine comes in a choice of 10 different output ratings, ranging from 215 to 348 hp.

Buick also has recessed luggage space for 1961 but compartment is awkward to load because of high deck opening.



Chrysler is only medium-priced car to provide complete set of instruments. Gauges are inside huge plastic bubble.

a 30,000-mile lubrication interval. It has a special chassis feature of its own, however, in its unusual method of suspension. Extra shackles front and rear allow the wheels to move backward as well as up under impact from the road. This results in a very smooth ride for a car of the Mercury's size and is particularly effective in reducing the "thump" from such irregularities as tar strips.

Fortunately, the extra wheel movement does not have an adverse effect on handling. The action is controlled so that proper tread and camber are maintained at all times.

Noticeably easier to control than last year's model, the new Mercury is stable both in turns and on fast straights. Body sway is within reasonable limits and tire squeal is no worse than average. The power steering, however, comes in for minor criticism. While it is fairly quick and has a live feel, it does not respond with absolute precision.

Interior space compares favorably with that of the larger 1960 version. The transmission bulge is more in the way, though, because the new Mercury's shorter wheelbase has forced the housing farther back into the passenger compartment. Overall finish is about average in both materials and assembly.

Small touches worth noting include clearly marked power window controls for the driver to eliminate needless fumbling, a blinking parking brake light that is impossible to ignore and a rubber strip set into the side trim to prevent minor nicks and scrapes from the doors of other cars in crowded parking lots.

Against such careful planning, a poor trunk design stands out in sharp contrast. The compartment has a huge cubic capacity but is altogether too shallow to be of serious practical value. Normal luggage must be juggled to fit properly.

CHRYSLER

Unsurpassed as a highway machine, Chrysler is the least changed make in its class this year. The car's greatest novelties for 1961 are a new "economy" version and an optional, three-speed manual transmission.

Chrysler has four series: the 265-hp Newport, 305-hp Windsor, 350-hp New Yorker and 375-hp 300-G. Of these, all but the Windsor were subjected to testing.

The Newport is a lower-priced addition to the line, based on the same 361-cubic-inch engine and same mechanical components as the Dodge Polara. Though much less powerful than the 413-cubic-inch New Yorker, it is also lighter in weight and proved an equally good performer.

Across the board, Chrysler has outstanding acceleration. It is the only make in its field which, with any engine option, can record 0-60 times of less than 10 seconds. And the mighty 300-G, powered by a ram induction version of the New Yorker powerplant, was the hottest of all the medium-priced cars tested.

Newport and New Yorker economy was average for cars of their power, while the 300-G paid for its performance with the poorest mileage in the group.

The two lower-powered cars had Torqueflite, Chrysler's responsive automatic that combines a torque converter and three-speed gearbox. Fitted to the 300-G was an all-new manual transmission but it showed no performance advantage over a similarly powered car with the automatic. It was also difficult to use in traffic because it lacked a synchronized first gear.

Chrysler handling still rates as the best in the make's field. Because the suspension is relatively firm, the car is extremely stable at high speeds, whether headed down a straightaway or around a tight corner. This is particularly true of the 300-G, which has even stiffer springs than the other series.

Riding qualities are also good, though harder than those of other makes in the group. Rebound is fast and causes some tire slap traversing a series of small bumps. However, very little shock reaches the passenger compartment. On this point, the 300-G gets an especially low rating; it does have a severe tendency to vibrate on rough surfaces.

Inside, all three series share virtually the same dimensions. High-backed driver's seats are featured in the Newport and New Yorker, while four individual buckets accommodate the passengers in the 300-G. Materials are of excellent quality but details of assembly show signs of carelessness.

Chrysler is one of the few makes that provide a complete set of instruments. At night, electroluminescent lighting makes them easy to read, yet free of glare. Unfortunately, though, they are placed at varying distances from the driver's eyes and cannot all be taken in at a quick glance.

One instrument, the ammeter, verifies Chrysler's claims for an interesting change under the hood. An alternator has replaced the generator and provides a charge even at idling speeds.

DODGE

The performance and roadability that make Chrysler a top road car are also featured by Dodge. Only one medium-priced series is offered, the Polara, and it is virtually a mechanical duplicate of the Chrysler Newport.

Aside from its distinctive sheet metal, the Polara's main advantage over the Newport is its broader selection of engines. The same 265-hp, 361-cubic-inch unit is standard but, in addition, there are 325- and 330-hp options based on a 383-cubic-inch block similar to that used for the 305-hp Chrysler Windsor.

The 265-hp Polara was tested as a heavy convertible and, as a result, did not reveal the maximum potential of its performance. Nonetheless, it was among the better accelerating medium-priced cars and delivered reasonable mileage. A 325-hp version also underwent MT's scrutiny and proved very fast. Its fuel consumption was average.

Dodge's third power alternative, the 330-hp unit, features ram induction. It is an enthusiast's engine, capable of terrific acceleration at the expense of silence and overall flexibility, while the 325-hp unit provides very high performance with greater suitability for normal highway use.

The transmission in both test vehicles was Torqueflite. With a variation of 60 hp, it seemed to react differently. It was quite smooth in the 265-hp car but shifted rather abruptly in the 325-hp. A new heavy-duty manual, similar to Chrysler's, is also offered by Dodge.

The springing consists of torsion bars at the front and semi-elliptics at the rear, the customary arrangement for a Chrysler product. Because of its relative firmness, it is extremely stable. Add precise, quick power steering and the degree of control is remarkable for a vehicle of the Polara's size.

However, the stiff springs also affect riding qualities. MT's pair of Polaras were comfortable under most conditions, but at moderate speeds over rough surfaces, the very circumstance that shows most medium-priced cars at their best, there was a distinct vibration.

Both cars were finished inside with a luxurious, pleated vinyl. The driver's side of the front seat had a high back for firmer support on long trips.

The dash layout is little changed from last year. A legible speedometer is mounted above the dash proper, where the driver can see it with the least possible movement of his eyes from the road. Secondary instruments, however, are set low and are hard to read at a quick glance.

Dodge's assembly quality appears very good for a Chrysler product but is only average for the medium-priced class as a whole.

One last comment has been reserved for an accessory fitted to the 325-hp test car. Special front and rear bumper guards had rubber inserts to prevent dents and scratches while parking or pushing, strong evidence that Detroit designers have begun to understand just how their creations are actually used.

THE LUXURY CARS

A WHOLE CLASS OF CARS THAT IS CHANGING ITS PERSONALITY IN ORDER TO ESTABLISH NEW CRITERIONS OF LUXURY

by Bob Ames

WITHOUT FANFARE, the luxury cars of Detroit are changing. The pressing reason is that many low- and medium-priced lines have assumed qualities once the exclusive domain of luxury cars. This makes it difficult to sharply define any significant differences between lower-priced and expensive cars, although these differences certainly do exist.

Size, for example, is no longer any indication of price. A Buick, Oldsmobile, or Pontiac can be longer than a Cadillac, while a Mercury is actually longer, wider and higher than a Lincoln Continental. Likewise, inside dimensions often mean little — a Plymouth has more hip space than an Imperial; a Chevrolet, more headroom than a Cadillac; a Ford, more legroom than a Lincoln; and a Falcon seats more people than a Thunderbird.

Quality of construction, materials and workmanship is something which can be pinpointed accurately. In the luxury field it is far greater than in any other class of cars. In this review it is judged by luxury standards, and a car that rates only average for this class might be far superior to a compact made by the same corporation.

Perhaps the most tangible asset of the luxury class is the ride. In nearly any other class of cars, the luxury ride would be too soft for practical purposes. But with heavier cars and an excellent balance between sprung and unsprung weight, the luxury class achieves a soft ride combined with reasonably good stability at most speeds.

Passenger compartments are well insulated from the road and wind. Even in heavy traffic conversation can be carried on in normal tones if the windows are rolled up.

Generally speaking, the luxury class scores high in passenger comfort, ride, detail quality, back seat room and accessory placement. Conversely, overall handling, gas economy, traffic and parking maneuvers and luggage capacity are often below normal.

Ford's Thunderbird may seem like an interloper in the luxury class. However, the Thunderbird is far removed from its original concept of a two-seat personal car. Gradually it has assumed more traits of a true luxury car, while keeping the image of a specialty car. This transition may be almost over for the Thunderbird. But it may be only beginning for the luxury three — already there are signs that other cars are moving toward the Thunderbird concept.

CADILLAC

Cadillac is one of the most respected cars in the world — yet it is the most conservative luxury car made in this country. Instrumentation, interior finish, details and overall design, although tastefully moderate, are exceptionally well planned with superb quality in carrying them out.

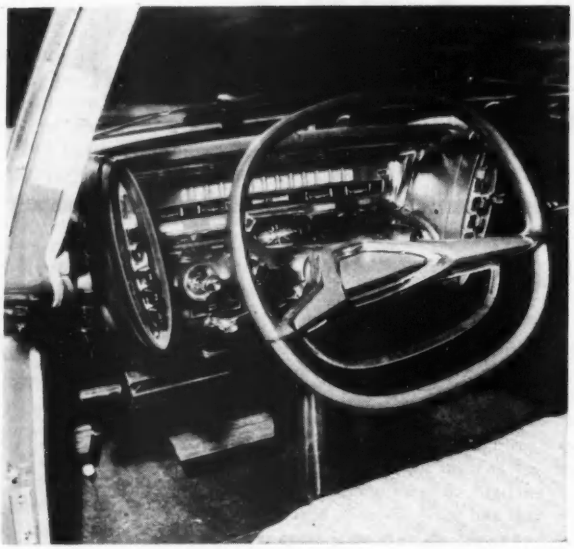
Like all other cars in its class, Cadillac has only one powerplant, a 390-cubic-inch V-8. Driving through a 3.21 rear axle ratio, MOTOR TREND's test Sedan De Ville was the best performer of the luxury class by a tenth of a second. Acceleration was smooth and mid-range passing reserve good. The gas economy is not good, but the final figures were about normal for the luxury class.

The ride at high speeds, which was always good, has been considerably improved by engineering changes in the front suspension. Stability is better, and the feel of control at all speeds is more precise. Overall behavior of the car during cornering, acceleration and braking is also better, and judged by luxury-car standards Cadillac is a good-handling car, although not the best in its class.

Cadillac has a new body this year. However, the styling is so close to last year's that design benefits could be overlooked. The body shell is shared with other GM cars but in Cadillac's is stretched out to give more room in the back seat. In front the dogleg has been eliminated; in back the door is six inches wider and opens 7½ inches more, both of which make entry and exit far less complicated. In most interior dimensions, Cadillac is no better than most other standard-size GM sedans. Front seat room for passengers is generous but not spacious; head- and hiproom in the back are about average, but due to the stretched-out body several inches have been added to legroom.

Cadillac seems to favor a soft ride for comfort, compensating with firmer upholstery to support back muscles during long trips. In practice this combination is exceptionally compatible, and long trips are pleasant and not too tiring. True to luxury standards, the passenger compartment is remarkably quiet, without a whisper of road, engine or wind noise.

The general layout of the dash panel is extraordinarily practical. Without moving his left arm from the armrest, the driver can open the door, lock all doors, open any window or vent, adjust the front seat six ways or adjust the outside rear view mirror. One can also control easily with his left hand the cruise control, lights, air conditioning or windshield wiper.



Imperial's instrument cluster is big, impressive and ornate. Electroluminescent lighting, a 1960 carryover, makes controls exceptionally legible at night.

With the automatic gear selector in park position, Thunderbird steering wheel can be swung 10 inches to the right for easier driver entry and exit.

LINCOLN CONTINENTAL

The biggest difference in the Lincoln Continental is easy to see, but other, more subtle, engineering changes have greatly altered the way it performs and handles. In the long run, these developments may be more significant than the new styling.

With the largest (displacement) engine of any domestic car, performance is somewhat limited by a two-barrel carburetor. This is reflected in both the acceleration and economy figures.

CAR	0-30	0-45	0-60	Gas Mileage
CADILLAC				
62 Hardtop 325 hp, Automatic	3.8	6.7	10.4	8-12
IMPERIAL				
Crown Hardtop 350 hp, Automatic	3.7	6.7	10.5	8-12
LINCOLN CONTINENTAL				
Sedan 300 hp, Automatic	4.7	8.0	12.9	10-14
THUNDERBIRD				
Convertible 300 hp, Automatic	4.0	6.9	10.5	9-13

On one hand, the Lincoln is the slowest accelerator of the luxury field; on the other, it has the best miles-per-gallon range. Performance figures are a little misleading, however, especially in the mid-range speeds. From 20-60 mph there is far more reserve than might be expected from the 0-60-mph time.

Overall ride and handling qualities have been materially improved. The ride is good, according to luxury standards. On a broader scale, it ranges to the soft side, and has a slight tendency to float at high speeds. This trait is seldom encountered at legal speeds and will probably never be noticed by normal drivers. Cornering is better but still less than good, and sharp turns at fast speeds will produce a certain amount of wallow.

Along with its new styling the Continental took on new dimension: overall length is 15 inches shorter and wheelbase eight inches less. Slow-speed maneuvers are a lot simpler, but driver vision close to the front wheels is limited, and parking is largely a matter of guesswork.

Inside, the Lincoln has one of the better front seat layouts of any domestic cars for two passengers. Although not actually bucket seats, the backs are slightly contoured and well fitted to the average person. A fairly wide armrest supports a third passenger's back, but his comfort on long trips is limited. The padding of the seats is one of the softest currently offered. It is exceptionally comfortable for short periods but offers little solid support for long trips.

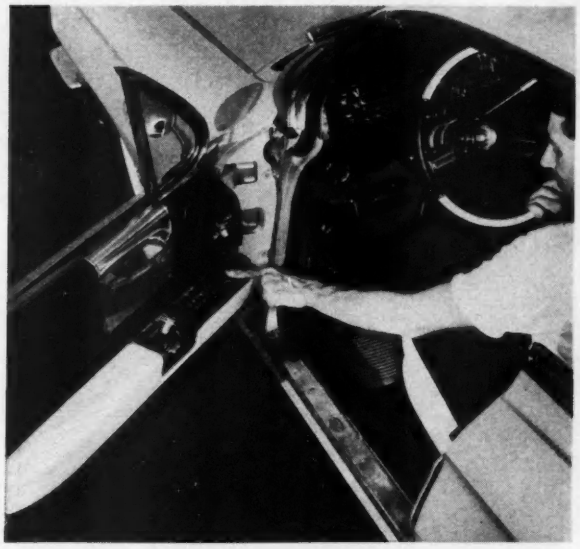
Driver controls are diminutive in appearance but are well placed and easy to read. The fresh air controls are extra-practical: a single button operates heater, air conditioning and vents.

IMPERIAL

Imperial is the only Chrysler Corporation car that still retains the principle of sheet metal bolted to frame. Except for this difference, overall engineering features are the same as in other corporation cars.

The test car's 413-cubic-inch V-8 is not the biggest displace-

Horizontal panel above Lincoln's door lock control flashes red light if one or more doors are unlocked. Switch will lock or unlock all doors simultaneously.



Cadillac's left armrest is location of many of the controls for car's electrical accessories. Nearly any driver control can be changed without moving arm.

ment in the luxury field but does have the highest power rating. This powerplant is teamed only with Chrysler's Torqueflite, one of the smoothest and most efficient automatic transmissions currently available from Detroit. The Imperial has ample performance, with particularly good reserve for mid-range passing maneuvers. Mileage, while not outstanding from an overall standpoint, is about average for the heavier luxury field.

What is impressive is the car's handling, which is good for any class of cars and the best of any car in the luxury field. Stability is excellent at any speed, cornering precise and the ride pleasantly firm. Physically, the car is the biggest 1961 car and slow-speed maneuvers emphasize this fact. Judgment is largely intuitive, normal parking problems are more difficult and much of the car's handling potential is lost in traffic, simply because it is too unwieldy for heavy city traffic. The better handling qualities are an advantage more on the open highway, where the ride is stable, precise and well above average for comfort.

Imperial's passenger compartment has generous proportions, especially in the back seat area. Overall passenger comfort is above normal even for the luxury class, although a large transmission hump makes riding in the middle awkward. Noise and drafts have been virtually eliminated from the inside, making it difficult to get any sensation of speed — which emphasizes an excellent Imperial option, its cruise control. Rather than depend on a buzzer which the driver could ignore, Imperial's speed control fights back by abruptly shoving the driver's throttle foot upward when a pre-set speed has been reached.

Like its exterior features, Imperial's interior appointments lean toward ornateness. But this does not detract from their practical placement for everyday use. The air conditioning unit has been redesigned with two vents on the dashboard.

THUNDERBIRD

Ford's Thunderbird is the only domestic car that is successfully bridging the transition from specialty car to the luxury field. This change is not complete, and may never be. The Thunderbird will probably always be primarily a four-passenger specialty car but based on luxury-car standards.

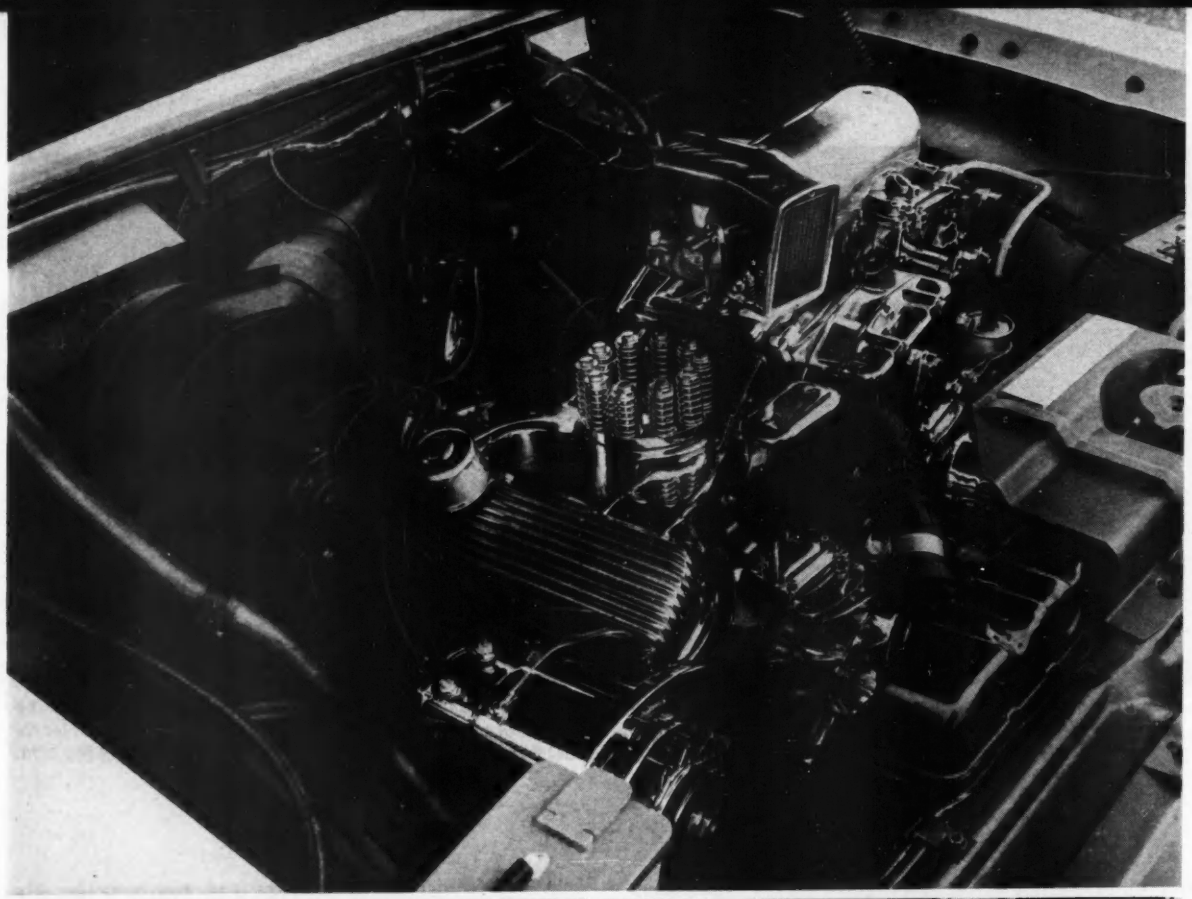
One luxury-car peculiarity that Thunderbird now has is that only one engine, transmission and rear axle ratio are available. Performance is about average for the luxury class, while gas economy is a little better than normal.

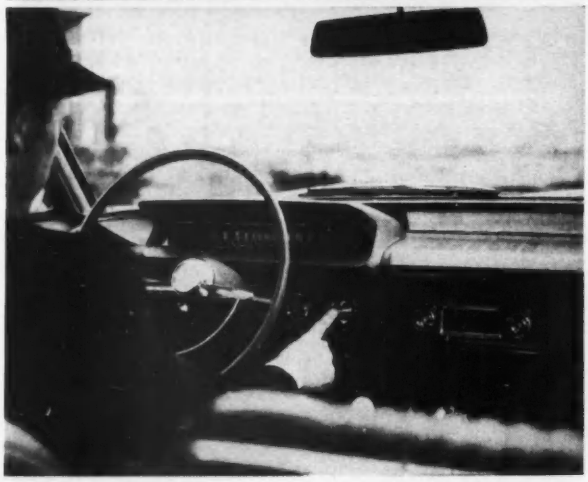
The Thunderbird's suspension has been redesigned, the tread is one inch wider and the power steering has been quickened. These changes add up to better roadability. While spring rates are still quite soft, causing some float at highway speeds, body sway in turns has been sharply reduced. Cornering and highway-speed driving are considerably improved over last year, without any harshening of the ride.

The Thunderbird retains most of its specialty-car flavor inside the passenger compartment. Each seat is an individual bucket, with a console down the middle dividing the interior lengthwise. The console has been reduced in size this year, and in the rear a middle passenger can be seated, actually if not practically. Driving controls are well placed, although some may find the steering wheel a little too close. One new option, the steering wheel which can be moved to the right, makes it easier for driver entry and exit.

Carrying a lot of luggage is a provoking problem on the Thunderbird. On the convertible the top folds into the trunk, making the open-air T-Bird unusually sleek. However, this eliminates practically all usable trunk space when the top is down — and seriously limits it when the top is up. This feature is also a limitation of the sedan, which has a normal trunk but for most hauling situations has little more usable capacity than the convertible.

Judged by luxury-car standards alone, the Thunderbird is not quite a match for the best cars in its class in the normal, pure luxury qualities, such as ride, comfort and passenger capacity. But the car has distinct and unique features that no other luxury car can offer.





THE SUPERCHARGED PONTIAC LE MANS

a show car that houses a surprisingly modified engine

SHOW CARS are seldom "go" cars, but the Le Mans Coupe, a special version of Pontiac's Tempest built for the International Auto Show at New York, is an exceptional exception. Under the hood was an experimental supercharged Slant Four, and if Pontiac ever produced it in quantity, the Le Mans would probably be the hottest Detroit car in the country.

People at Pontiac are quick to affirm that the Le Mans in supercharged form will never be anything but a sporty show car. There is little reason to doubt them either, since Detroit's experience with supercharged cars has always been disappointing. But the rest of the Le Mans, or parts of it, may have a good chance for ultimate production.

There are a few cars that seem to have just the right amount of chrome in just the right places. The Le Mans is one of them, and has unquestionable appeal with its combination of trim and sheet metal.

The chrome-plated wire wheels with knock-off hubs are the *piece de resistance* that sets off a striking exterior. For many persons wire wheels with their sharply defined narrow-band whitewalls will make the coupe. This is a Le Mans styling feature that Pontiac undoubtedly never will offer with a stock Tempest, since these wheels are expensive, hard to keep clean and easy to damage.

Inside the Le Mans, the overall design is equally excellent. Like the exterior, the passenger compartment is little different from a standard Tempest. However, the choice of trim and the location of chrome seem to be exactly right.

There is one interesting and peculiar piece of trim in the interior. Earlier this year Pontiac expounded the virtues of a near-flat front floor. In the Le Mans, the transmission hump is entirely chromed with small vertical strips, making the hump, to the eye at least, the most obvious feature of the passenger compartment.

The semi-bucket seats make it virtually impossible to seat a third person in front. But the floor-mounted transmission shift lever makes it even more so. Directly ahead of the transmission lever on the transmission hump is a tachometer.

The instrumentation and driver controls are stock, except for one item. On the right is a button labelled "Push to Stop Engine." Actually this isn't a panic button but turns off the magneto, the only way to get the supercharged Tempest powerplant to quit.

The engine is undoubtedly the most interesting feature of the Le Mans. Since they have announced the firm intention of doing nothing with the car but showing it, Pontiac engineers have released very little information, except that it is a stock Tempest Four with a GMC blower.

Ordinarily, this would make it exceptionally difficult to pin down any reliable performance figures. But last December a well-known West Coast hot rodder did the same thing with a Tempest engine. The hop-up artist who modified the Slant Four was Mickey Thompson, who is as familiar with Pontiac's engines as he is with ultra-high speeds.

Thompson's supercharged Tempest was a rail job, and the engine was not exactly stock. The bore and stroke were normal, but special pistons, connecting rods and camshaft were installed, along with a Scintilla Vertex magneto and a 4-71 GMC blower.

The first run with the Tempest four-cylinder engine turned in a fantastic record. The top speed was 151.54 mph, and the e.t. 9.94 seconds for the quarter-mile. While the rail job did far better than the same setup would get in a stock Tempest sedan, the increase in acceleration could be incredible.

All of this leaves the two important points unanswered. The first has to do with the exterior and interior of the Le Mans. Overall, and without being basically different from a stock Tempest, the Le Mans is a magnificently finished automobile. Since the car is definitely a show car without any plans for production, there must have been a reason to exhibit it in New York.

The most logical reason seems to be that Pontiac wanted to get firsthand public reaction to a compact that went all the way on quality, both in materials and trim. The reaction was overwhelmingly enthusiastic, and this may mean a sharp upturn in the detail quality on compacts. There is good evidence that this is already happening, with the mid-year announcement of sports coupes for almost every compact line. The difference between a low-priced compact and an expensive one may well be the difference between a stock Tempest and the Le Mans — simply one of overall quality.

The second point is obvious and concerns the supercharged engine. The reason for this is a little harder to pin down. Of course, Pontiac may have just wanted something spectacular to call attention to the Le Mans at the show. On the other hand, the design is so complete that even the hood has a row of air louvers on the left side. Moreover, it is a well-known, but little publicized, fact that the Le Mans, sans exterior chrome and wire wheels, has made some fantastic acceleration tests on Detroit test tracks.

Pontiacs have always been outstanding performers at the drag strips with their big engines, and it seems only logical that the Tempest should follow this line. But regardless of the reason for the supercharged Le Mans, one thing is certain — Mickey Thompson proved that a supercharged Tempest engine was practical, and Pontiac engineers proved that it will fit in a stock Tempest.

The Tempest owner who is performance minded and has the mechanical talent to install a GMC blower can give a tremendous surprise to any stock-car owner who challenges him at the drag strip. /MT

The pictures at left point out many of the eye-catching features of the Tempest-based Le Mans. Most viewers are understandably awed by the GMC supercharger that rides high on the four-cylinder engine. A small button on the dash (picture at lower, left corner) must be pushed to turn off the magneto and stop the engine. Note the location of a tachometer on the chromed transmission hump — quite novel for a Tempest.

ROAD TEST
RENAULT GORDINI

Add a few horses and a new transmission and the Dauphine becomes a tigress

THE ALL-OUT ECONOMY CAR has come a long way during the past five years of its development by European builders for American drivers. And it takes little more than an hour or so behind the wheel of Renault's new higher-performance Gordini model to prove this fact.

While the power rating is advanced by only eight horses from the original Renault Dauphine rating of 32, the addition of a well-ratioed four-speed transmission transforms this Gordini version of the well-tried Dauphine from a princess into a beady-eyed little tigress.

Outwardly, it has vastly improved interior trim, combining vinyl and cloth, or all-vinyl seats and panels. Other obvious Gordini signs are vented disc wheels in place of the solid discs of the Dauphine, and a spate of chrome lettering on the front fenders.

Under the rear deck lid where the engine hides is something else again. French racing designer Amedee Gordini, now a special consultant on power trains for Renault, has pumped almost a 25 per cent boost in power output into the Dauphine engine without altering the basic 845 cc (51.54-cubic-inch) displacement of the engine. Intake valve head size has been slightly enlarged by .047 of an inch to 1.11 inches. The intake valves open to seven degrees before top dead center on the Gordini, compared with six degrees on the Dauphine engine, and they close 45 degrees after bottom dead center, compared with 30 degrees on the Dauphine.

The camshaft redesign and resultant change in valve timing, plus some very intelligent work in smoothing out manifolding kinks, both on exhaust and intake sides, have worked wonders at putting a snarl in the proper place of this little car's engine note. There is, of course, a different ignition curve, and to facilitate the tighter engine wind-up with the new camshaft, valve springs are heavier enough to hold down valve bounce.

But the big value package offered in the Gordini version not obtainable without expenditure of hundreds of dollars worth of conversion work, is the beautiful little four-speed transmission. This is an option that some thousands of loyal Renault Dauphine owners must have sworn was the thing they needed most — and the Gordini certainly has it.

The new cam does not "come on" to any great shakes down at the bottom of the power curve, and even by popping the clutch, it is almost impossible to induce wheelspin in low-gear take-offs. But low cog, with a transmission ratio of 3.7, does allow the little car to roll rapidly to the 20-mph mark before a fast shift into second. There's no great strain getting to 40 mph in second, and third gear, (with the cam coming on) will carry a spirited driver right up to 60 mph. In fact, acceleration tests let third cog carry the car just past the 60 mark on the dead-accurate speedometer for a rather remarkable 0-60 time of 22.3 seconds, considering that the car weighs some 1600 pounds wet, and the little 845 cc engine puts out just 40 hp at full cry — turning 5,000 rpm at peaking speed.

This calls for a side note right here about the speedometer, which is an indicator of the kind of tight quality that shows all around this Gordini model. A check showed the speedo dead on the money at every five-mile increment from 25 through 70 mph, without enough waver to notice on the checking

The most obvious indication that the Gordini is more than a Dauphine is offered by the improved interior trim. Vinyl and cloth combinations are used.

The more startling changes in the new Renault are in the engine compartment. The Dauphine engine has had its power potential boosted almost 25 per cent.

instrument. Not only that, but the odometer was dead accurate, on a 100-mile check.

On other quality items, the interior finish, including upholstery, door panels, floor mats, vinyl headliner, chrome trim and door fit, all rated "excellent" marks by the testing crew. Exterior chrome, paint and panel fit also were as fine as you could ask even from a car costing much more.

There were more plus marks for the seven-cubic-foot luggage compartment, which latches from the inside, and is free of the burden of a luggage-soiling spare tire and wheel. This, as with the Dauphine, lives in a separate, lower compartment up front, where it doubles as a shock-absorbing bumper in crack-ups.

Back inside for a minute, there's no stinting on instruments, with both a fuel gauge and temp gauge on the panel, with the speedo and the usual warning lights for oil and amperes. The speedo lacks a trip or a tenth-mile reading, which is tough on rallyists, but what it lacks in markings it makes up in accuracy. An engine as spirited and willing as the Gordini could certainly use an accessory tachometer – and an oil gauge.

Elsewhere in the cockpit, the wipers are simply designed and lay neatly against the bottom of the windshield in "park" position — something that can't be said for a number of economy sedans. There are two open-mouth glove compartments, one rather large and the other, at the driver's left, a tiny cubby suitable for cigarettes and smaller items. The doors have snug, neatly trimmed side pockets for maps and papers.

The floor-mounted shifting lever retains that strangely disconnected Renault feeling, which makes you wonder if there's really anything coupled to the other end — until you get used to it. And there's really no reason why it shouldn't be bent back more toward the seat, since the throw up into low and third gears will tax the longest arms, if the seat is full back for six-foot drivers.

In the handling department, the Gordini version is still basically Dauphine — a rear-engine car with 60 per cent of the weight on the back wheels. This, of course, spells oversteer, with a capital "O," and any driver unfamiliar with rear-engine cars is advised to restrain any gay abandon in cornering well-over-the-head until he finds out the true facts of life about swing-axle hop and the tendency of rear engines to come 'round for a look at the front every once in awhile.

But under the urging of an experienced hand, the Gordini with that little extra load of horsepower, and a transmission which encourages fast, slick downshifting, can be a delight in the bends and corners. There has never been any question but what Renault has long offered one of the best rides of any short-wheelbased car in the world — even in the old postwar 4-CV models. The Gordini is no exception, and the new Aerostable rubber bag suspension device does give a solid, mounted-in-rubber feeling to the entire car.

All this is aided, of course, by rack-and-pinion steering, the most accurate system yet devised for precise control of an automobile. Although it does require 4.6 turns from lock-to-lock, a seemingly long wind-up of the wheel, the Gordini moves quickly to exactly the place you point it, with an absolute minimum of effort. What's more (and what really accounts for the 4.6 turns), is a remarkably short 30-foot turning circle, which means that the car turns in its own length.

Braking on Renault cars has always been good, and the Gordini has the Dauphine's nine-inch brakes, aided by cooling from the slotted wheels. A neat pressure compensator system insures against overloading the braking action of the light front end.

For the cold-climate buyer, the excellent heavy-duty heater of the Dauphine is included in the purchase price of the Gordini, complete with a defroster. The whole package is operated with simple controls, and it is almost possible to cook a passenger by diligent use of the heater. There is a second duct and heater outlet under the rear seat.

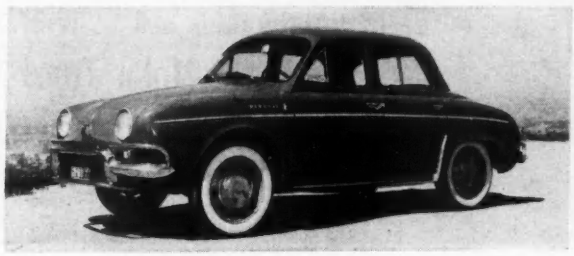
And speaking of seats, there is passenger room in the rear seats, and the front seats have a four-position adjustment for inclination of the seat backs and individual tracks for the two front bucket seats.

Front windows are of the proper roll-down type, the ones in the rear doors are sliders, but work well enough. The fuel tank (mounted back by the engine and not up front) holds 8½ gallons, while the little engine operates on a budget basis with only 2½ quarts of oil. The gearbox holds 2¾ pints, and the tires are full-sized 5.50 x 15 shoes, providing fewer revs (and less wear) per mile than many other imports and most of our own compact cars.

The makers claim 78 mph, which is fast indeed for an economy car — and timed test runs indicate that this is no exaggeration. The makers talk about 37 mpg, and this, too, is a believable figure, for the way the Gordini is set up, there's no reason to give away any fuel economy. On one tankfull, with reasonably conservative, but not economy-run driving, the car provided just a hair under 34 mpg, including city traffic, but excluding acceleration and top-speed tests.

The whole Gordini package, including an American-style 12,000-mile or 12-month warranty, comes to $1775 on the West Coast or $1596, East Coast. Added to that are varying sums for local taxes, dealer get-ready and freight from port to point of sale. And the only extras offered are a radio, a sun roof and whitewall tires.

The price tag, by the way, is just $211 more than the Dauphine. And there aren't many better examples of what more $211 can buy, anywhere. /MT

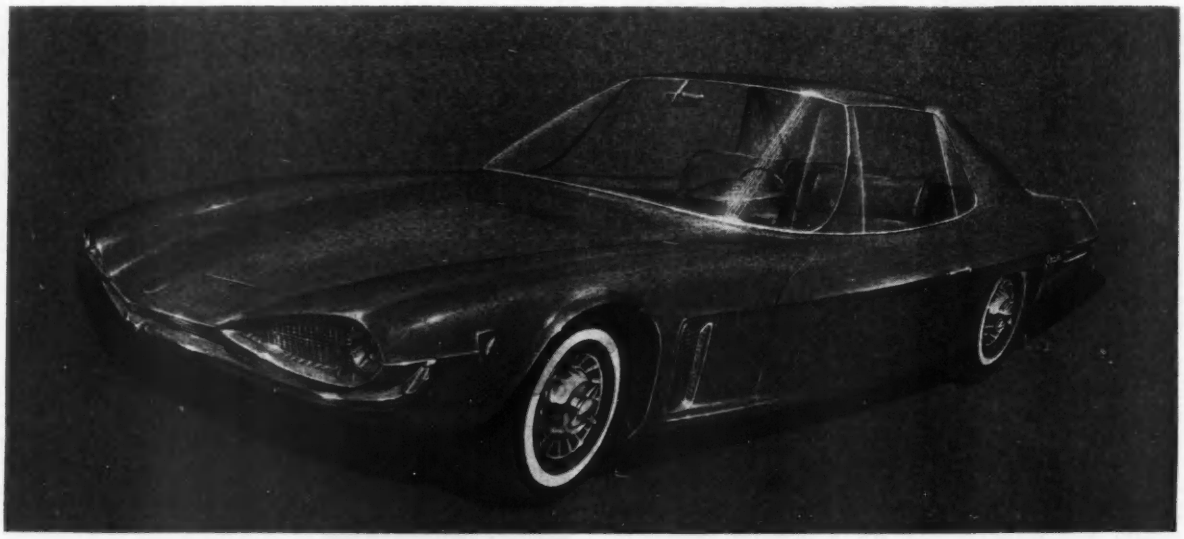


MOTOR TREND TEST DATA

TEST CAR:	Renault Gordini
BODY TYPE:	Four-door sedan
BASE PRICE:	$1596, East Coast p.o.e.
ENGINE TYPE:	Ohv Four
DISPLACEMENT:	51.54 cubic inches
COMPRESSION RATIO:	8-to-1
CARBURETION:	Single downdraft
HORSEPOWER:	40 @ 5,000 rpm
TRANSMISSION:	Four-speed manual
REAR AXLE RATIO:	4:37
GAS MILEAGE:	31 to 34 miles per gallon
ACCELERATION:	0-30 mph in 7.6 seconds, 0-45 mph in 11.3 seconds and 0-60 mph in 22.3 seconds
SPEEDOMETER ERROR:	Indicated 30, 45 and 60 mph are actual 30, 45 and 60 mph, respectively
ODOMETER ERROR:	Indicated 100 miles is actual 100 miles
WEIGHT-POWER RATIO:	40 lbs. per horsepower
HORSEPOWER PER CUBIC INCH:	.77

FOUND: TOMORROW'S STYLISTS

Eight young men are scholarship winners in the Motor Trend-Art Center School Design Competition



"A car should look like a car; not like a boat or flying object. Current trends, however, seem to indicate a resemblance to both. I would like very much to see a type of design that is unique to automobiles."

James G. Roberts
Age 25
Silver Spring, Maryland

"The one element that will remain constant is the human being, so all design will still have to be relative to him. The more consideration for the human, the more successful the total design of the car will be."

Allan J. Hastings
Age 25
Wichita, Kansas

THE FIVE MOST IMPORTANT automotive stylists in America gathered in a Detroit conference room last April in a meeting that mapped the future of eight MOTOR TREND readers. As final judges in the MT-Art Center School Design Competition, these chief stylists of the nation's five leading auto makers carefully studied the designs, portfolios and thoughts of a group of exceptionally talented young entrants and picked from them those best qualified to take up careers in their exciting profession.

All eight of the winners will receive full four-year scholarships leading to Bachelor of Professional Arts degrees at Los Angeles' Art Center School, one of the nation's foremost institutions of industrial design training. As announced in the February, 1961 issue of MOTOR TREND the Design Competition originally offered as prizes only four of these valued scholarships, but the surprisingly high quality of the entries and the enthusiasm of the judges prompted the sponsors to extend the award. The total value of the eight prizes is $24,000.

From every state in the Union and five foreign countries 2,937 interested readers sent for and received entry kits in the competition. By March 31 the entrants had submitted to the Art Center School their finished entry packages, which consisted of three 18 x 24-inch drawings of an original car or truck design, two detailed perspectives of that design and an altogether unrelated free-choice design which could vary from space ships to motor scooters. Along with their drawings, the contestants were required to submit an original essay which presented their frank thoughts on the "future trends of automotive design." Each of the elements played an important part in the final selections.

Representative work of each of the eight winners is presented on these pages. Following the name, age and place of residence of the winner is an excerpt from his contest essay. As the judges found, knowing the thoughts behind a man and his design is a great key to interpreting his work and potential.

The average age of the eight winners is 21. From many different locales, they represent a great variety of background and environment. Graham Bell now lives in New Baltimore, Michigan and works as a design illustrator for British Overseas Airways, but his original home was in Middlesex, England. Edwin Gwin is a student of mechanical engineering at Portland State College in Oregon. Gordon Brown attends the University

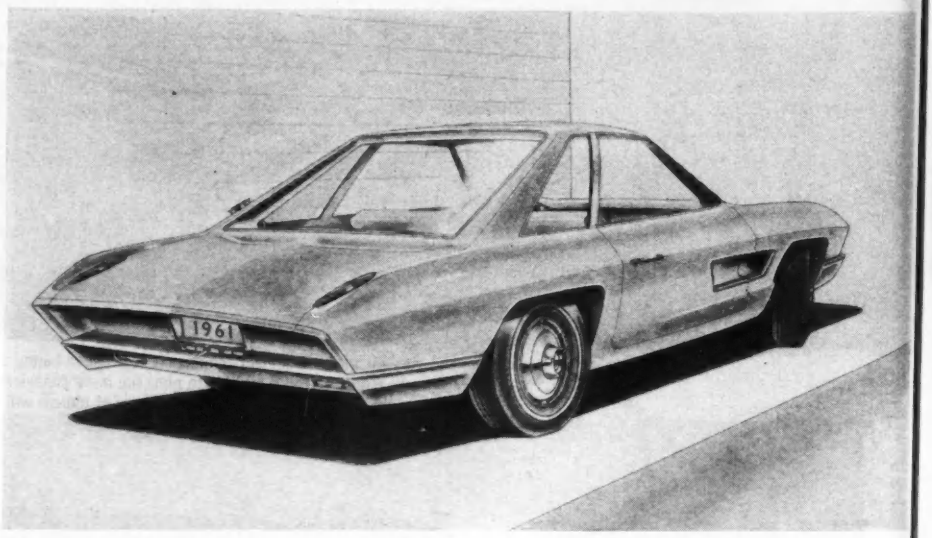
continued on page 57

Graham J. Bell
Age 20
New Baltimore, Michigan

"I feel that in the future the vehicle will not be suspended by a wheel, nor yet powered by an engine as such, but will be propelled and supported by a form of ultra sonic sound wave."

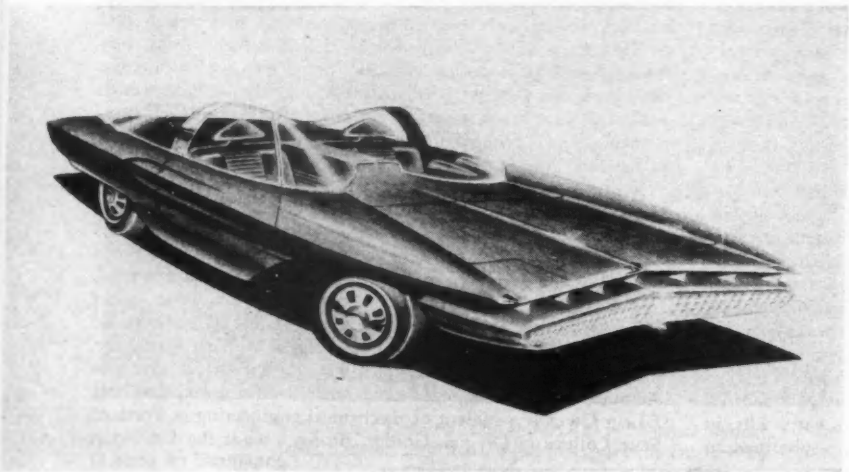
Edwin C. Gwin
Age 19
Tigard, Oregon

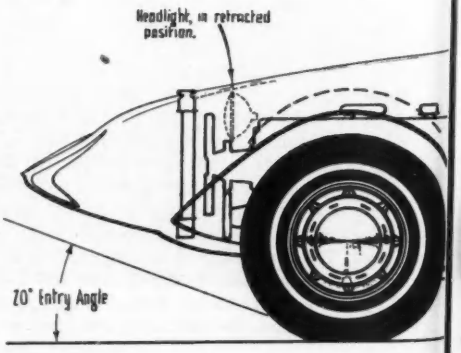
"If there is such a thing as a Renaissance in Detroit, I think we are seeing it now in the compact cars. These automobiles mark a return to sanity and simple, logical design which is just as admirable as most of the larger cars are detestable."

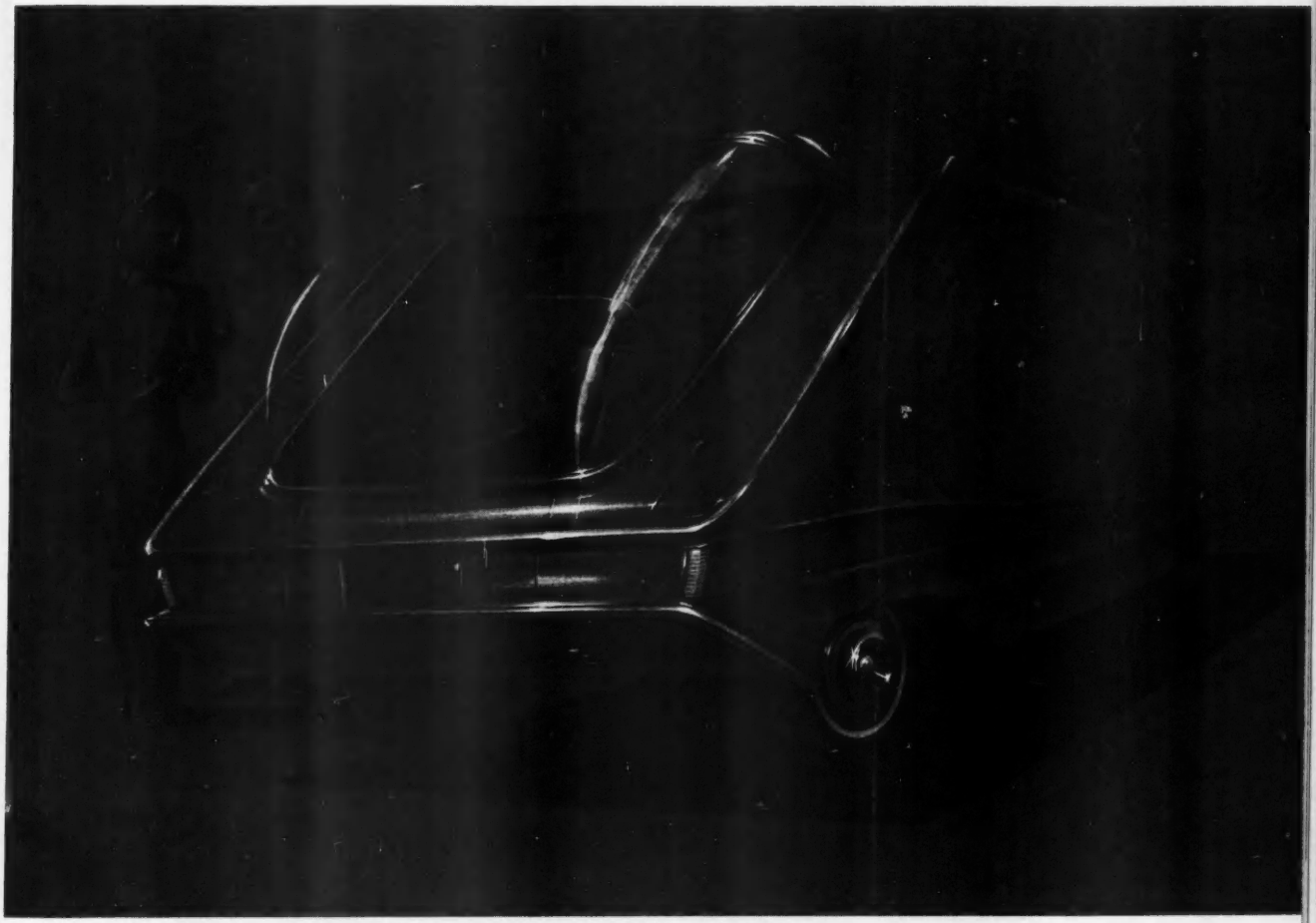


"The future of automotive design should be in the direction of a new conception of the ideal car. This involves recognizing that several basic and different sorts of automobiles are needed to satisfy the major segments of the auto-buying public."

Gordon M. Brown
Age 19
Minneapolis, Minnesota

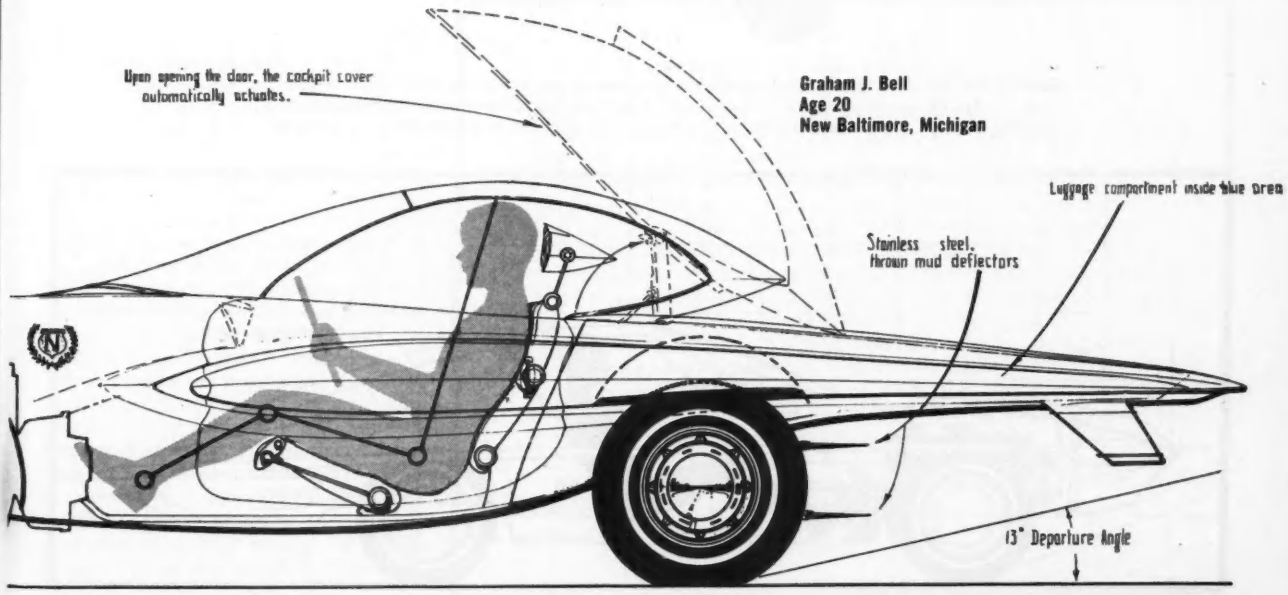


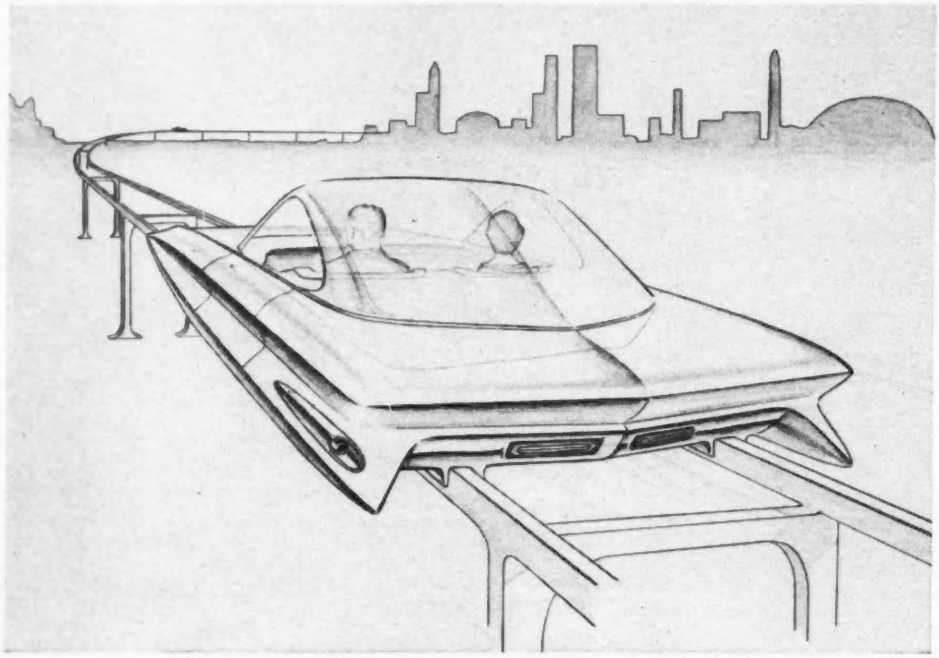




Joseph D. Orkoskey
Age 20
Dearborn, Michigan

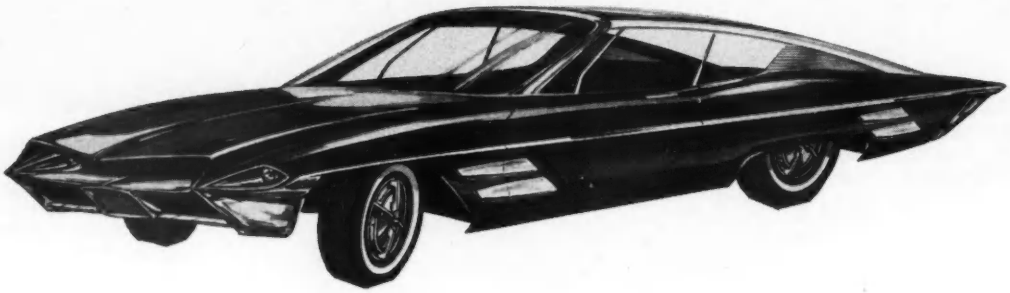
"The trend should be to designs that combine motion and fleetness . . . Mechanical flavor should be expressed both inside and outside the vehicle . . . I think the automobile designer will borrow from aviation sources."





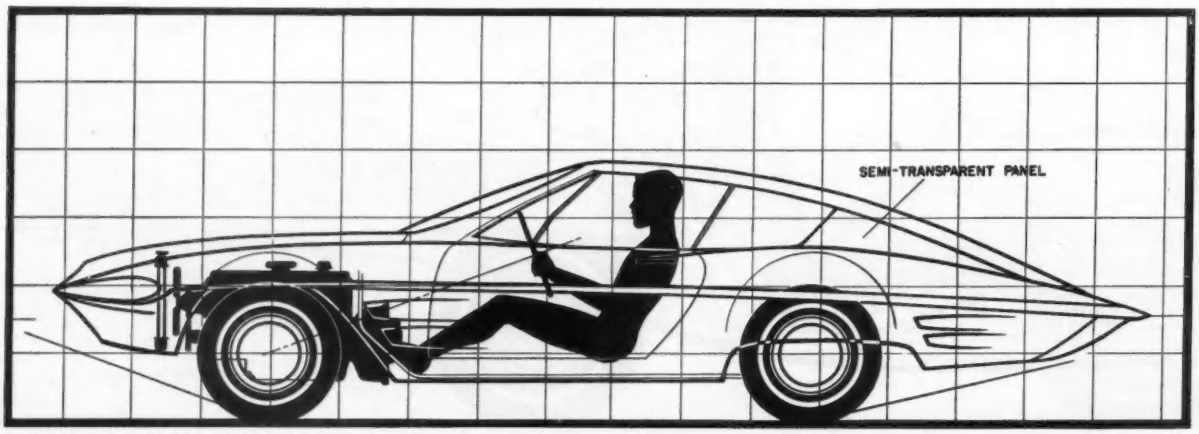
"In contrast with the somewhat cluttered and overly decorated appearance of most of today's automobiles, those of the future should, I believe, be designed with emphasis on function and simplicity."

Darwin T. Hawthorne
Age 19
Longview, Texas



Bruce G. Billings
Age 24
Rockford, Illinois

"The car of the future will have been refined to such an extent that it will be more than a thing of beauty. It will be a true automobile. One that the original creators of cars must have envisioned when they first made horseless carriages."



2-PASS. SPORTS CAR

of Minnesota and is a part-time salesman. Allan Hastings is an industrial designer for the Boeing Airplane Co. James Roberts is a technical artist in Maryland while Bruce Billings is in the same profession in Illinois. Joseph Orkoskey is a clerical assistant with the Probate Court in Dearborn, Michigan.

Within another few weeks the eight winners will leave these varied backgrounds and locales and meet in the halls of the Art Center School as they register for the Summer semester. They will join a student body of approximately 1,000 under the guidance of some 88 instructors. Founded by Mr. E. A. Adams 31 years ago, the Art Center School has pioneered the field of industrial design training with special emphasis on automotive styling. The head of the Department of Transportation Design is George A. Jergenson, one of the School's first graduates and a veteran of General Motors' styling department.

Preliminary judging in the Competition was conducted by Jergenson, Strother MacMinn, Hugh Jorgensen and Richard Collier, all members of the Transportation Design faculty. The portfolios of the finalists were then taken to Detroit for the judging by the distinguished final board. Edmund E. Anderson of American Motors, Virgil M. Exner of Chrysler Corporation, Randall D. Faurot of Studebaker-Packard, William L. Mitchell of General Motors and George W. Walker of the Ford Motor Company studied the work carefully and with great interest. Their excitement and contagious enthusiasm over the work of the fledgling designers was a real sign of their own love of the profession and their desire to strengthen it continually with new ideas.

Each of the five top stylists was free and outspoken with his thoughts on the future trends of automotive design and the challenges that will face the young stylists of tomorrow. Their comments are of interest to every auto enthusiast and MOTOR TREND has recorded them for publication. But they are being saved for a future issue so that these pages can be reserved as a single spotlight on the talents of the 1961 winners of the Design Competition.

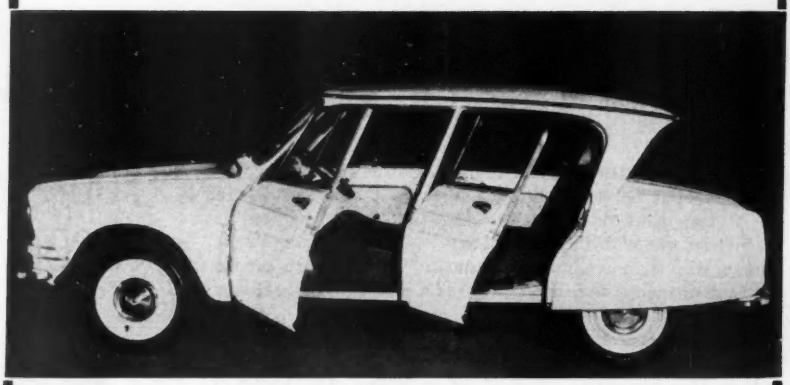
One thought which was expressed by all of the judges might be presented at this time, particularly for those entrants who did not reach the winning positions: the automotive stylist must have "gasoline in his blood"; that enthusiasm is essential for success in the field and can help him conquer any first fumblings in technical skill. Those skills and the mastery of design techniques can be learned and refined at such institutions as the Art Center, but, unless a young man has a real desire to work with cars and cars alone, he has little chance of establishing himself in the field of automotive design. The judges themselves are living examples of dedicated enthusiasts who have not lost one bit of interest in cars after all of their years in the field. /MT

The New Citroen Ami 6

TOTALLY NEW DESIGNS from three of France's biggest auto makers have been rumored for several months. Citroen, Renault and Simca have all been reported preparing radical economy cars for early introductions.

First to confirm such reports is Citroen, which has released preliminary information on a new small sedan to be called the AMI 6. Official photos show the car to be as unorthodox in appearance as other Citroen models. Though just slightly larger than the 2-CV, it shows a strong resemblance in its styling to the relatively big ID- and DS-19's. One bizarre touch it brings to the line is a reverse-angled rear window, similar to those of the 1958-through-1960 Lincoln Continental and the current Ford Anglia, but placed at a sharper slope.

The AMI 6 places a strong emphasis on comfort for a car of such small size. The body has four doors for easy access to the passenger compartment, with sliding glass in the front pair and roll-down windows in the rear. Though accommodating only four, the seats are deeply contoured for minimum fatigue on long trips. And a feature many small-car owners will appreciate is a large air intake in the cowl for adequate ventilation.



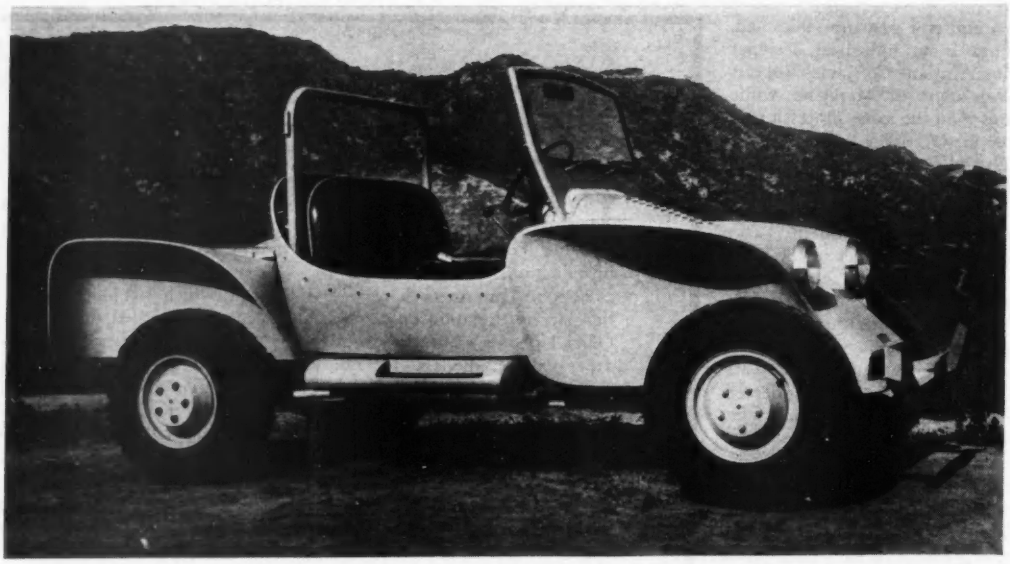
Little is known about the AMI 6's engineering except that the engine is an air-cooled, opposed two-cylinder of 36.6 cubic inches and, of course, power is transmitted through the traditional Citroen system of front-wheel drive. Exact power and torque figures have not been revealed, however.

Acceleration is said to be livelier than that of the 2-CV which, whatever its merits for economy and durability, has never been noted for performance. Even so, the AMI 6 will be something short of a bomb; estimates of its top speed are around 60 mph.

Presumably, the suspension of the 2-CV has been adapted to the AMI 6, with all four wheels independent but interconnected front and rear by coil springs at the center of the chassis. On the earlier model, this arrangement has been very successful in cutting down the pitching normally associated with short-wheelbased cars.

Meanwhile, speculation continues about the new Renault and Simca. According to recent reports, Renault will replace the 15-year-old 4-CV with a completely different design, featuring front-wheel drive and a squarish, utility body a la BMC 850.

Simca, on the other hand, appears headed in the opposite direction. Latest rumors about the Chrysler-sponsored make tell of a new small car with its 55-cubic-inch engine in the rear.



TRAIL BLAZER STYLING IS STRIKING, BUT EACH UNUSUAL FEATURE IS PRACTICAL—EVEN THE RUNNING BOARDS.

THE TRAIL BLAZER

FOUR-WHEEL DRIVE WITH A CORVAIR ENGINE

IT SEEMS ONLY FITTING that a four-wheel-drive car for sportsmen should be designed by a Westerner who has had a lot of experience in this area's rugged back trails. This is exactly the case with the Trail Blazer, and its developer, Victor Hickey, who frankly admits he wanted to build a sports car for the outdoorsman. The first prototype of a production model may be just that.

The Blazer is as radical a four-wheel-drive car as the Corvair is a compact car. It has a custom fiberglass body, four-wheel independent suspension, torsion bar springing, disc brakes, a center point steering, a six-cylinder, air-cooled engine borrowed from Chevrolet's Corvair and standard 9.50 x 15 tires.

Starting with the flat-opposed Six, power is taken to a conventional three-speed transmission and then to the rear wheels. For four-wheel drive there is a two-speed transfer case, which splits the torque equally between the front and rear wheels.

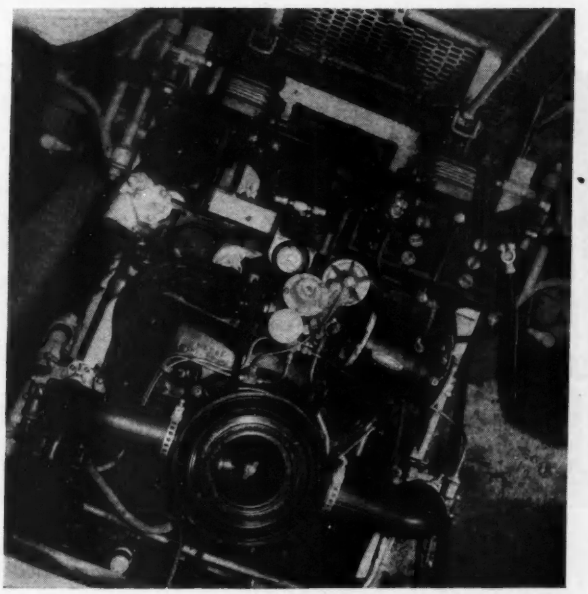
Suspension all around is by torsion bars, which run straight back along the frame. As opposed to the more common method of connecting the front wheels to the differential, the Blazer has a more or less conventional U-joint. This makes the joint far easier to clean after a trip over sand or mud roads.

The wheels and tires themselves are interesting. The wheel is dished out, and an optional set of wheels can be bolted on quickly, giving the Blazer either two or four dual wheels. Standard tires are 9.50 x 15, and this is an exceptionally wise choice. Four-wheel-drive enthusiasts have proven the value of wider tires, but the Blazer is the first four-wheel-drive car to make them standard equipment.

The Blazer's inboard disc brakes are one of the best innovations to be put on a four-wheel-drive car in years. The special and peculiar problems of braking in the back country are far different from those on the open road. Streams are frequently forded, submerging the brakes, and long, steep downhill stretches

Passenger compartment of Trail Blazer is Spartan, but has all driving essentials. Seats are exceptionally comfortable, and material is top quality.

Center point steering is an admirable quality of the Trail Blazer. Steering is light, positive and has the feel of power assist. Note the inboard disc brakes ahead of the Corvair powerplant in picture at right.



are common. Disc brakes are excellent for these purposes, since they dry off immediately and fade very little.

The Trail Blazer would be at home in a car show — but the practical four-wheel enthusiast will be able to point out a lot of advantages that most people would miss. The low, sweeping hood makes it possible to see very close to the front of the car and negotiate a bad trail. The elephant-ear fenders are also practical. Mud will follow a natural curve and be thrown out instead of caking up and jamming against the wheels. Moreover, the driver can look out and see his front or rear tire, giving him a precise point for difficult maneuvers.

Inside, instrumentation and ornamentation are stark, but everything a driver needs is there. Although plain, the interior is not austere. The naugahyde and foam rubber seats are the finest currently available on any four-wheel-drive car. For open-air driving, the convertible top comes off quickly. Actually, it has dozens of snaps, but removing it is no more difficult than unbuttoning a shirt. The car will be manufactured by Hickey Manufacturing Company, Inc., of Downey, California. /MT

THE REAR-ENGINE RACE CAR REVOLUTION

A REVOLUTION has occurred in European racing and sports car design. The engine-behind-driver layout has become standard practice, not only for its traditional advocates like Porsche, but also among such builders as Ferrari and Maserati.

Rear-powered machines show signs of dominating almost every type of international racing, Formula I, Formula Junior, Intercontinental and sports car. The only class that seems relatively unaffected is gran turismo and it, too, may soon be caught in the new wave. Italy's Enzo Ferrari sees important developments coming from the new crop of Formula I cars which, he predicts, will form the technical foundations of gran turismos built three or four years from now.

For many years, Porsche has raced successful rear-engined cars, but only in sports car and lesser grand prix classes, such as the old Formula II. It was England's Cooper that brought the idea to the big leagues and established a completely new pattern for modern Formula I design.

With smaller, 91.5-cubic-inch engines now the rule for Formula I, Porsche is getting ready to challenge Cooper on even terms. For the first time, the German firm expects to be a serious threat in major grand prix events.

The new Porsche is developed from the Formula II car, though it has an all-new powerplant. Its tubular space frame is independently suspended by coil springs at all four wheels and supports an eight-cylinder, opposed engine of 91.4 cubic inches. Air-cooled and equipped with dual overhead cams, the unit develops an estimated 180 to 200 hp at 10,000 rpm.

Other European firms placing engines in the rear of their racing and sports designs include Lotus, Stanguellini, Lola and Emeryson. But among the most interesting of all are the new machines from Ferrari and Maserati.

Ferrari has rear-engined entries for Formula I, Intercontinental and sports car competition. All three feature new, aerodynamic bodies with twin oval grilles a la BMW and Pontiac Tempest.

Two engines have been developed for the Formula I car, both 90-cubic-inch V-6's. The first has the cylinder banks at a 60-degree angle and separate crank throws for each piston. Its output is 177 hp at 9,000 rpm. The second has a 120-degree arrangement that looks almost opposed. It is a lighter unit with rods paired on common throws and develops 187 hp at 9500 rpm.

For Intercontinental racing, Ferrari has a variation on the 1960 Formula I design. The V-6 engine has been enlarged to 178.4 cubic inches and now delivers 304 hp at 7500 rpm.

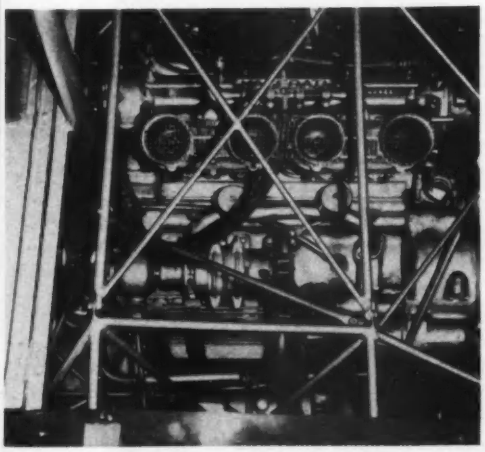
The engine in the rear of Ferrari's new Type 246 sports car is also derived from last year's grand prix V-6 but displaces only 147.4 cubic inches and offers 265 hp at 8,000 rpm. The potential of this machine was seen at Sebring, where it broke the lap record and led the race until a steering failure forced it out.

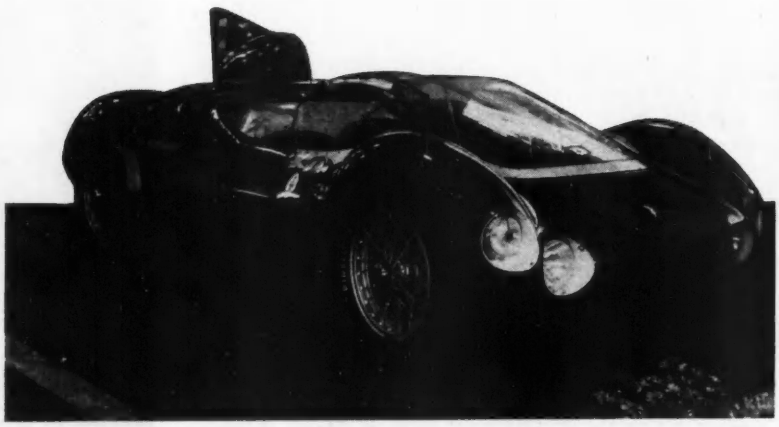
However, Ferrari is not placing all its sports car eggs in the rear-engined basket. Also new this year is a normal front-engined design, the TRI/61, powered by the familiar V-12. With 310 hp at 7500 rpm, this car weighs about 300 lbs. more than the Type 246 but proved its mettle by actually winning at Sebring.

Maserati, Ferrari's compatriot and rival, has joined the trend with its Type 63 sports car, a rear-engined version of the famous "birdcage" Type 62. Like the model it replaces, it has an extremely complex frame of very thin tubing. Independent coil springs and disc brakes are used at all four wheels. The engine, adapted from the Type 62, is a 176.3-cubic-inch Four that produces 255 hp at 7200 rpm.

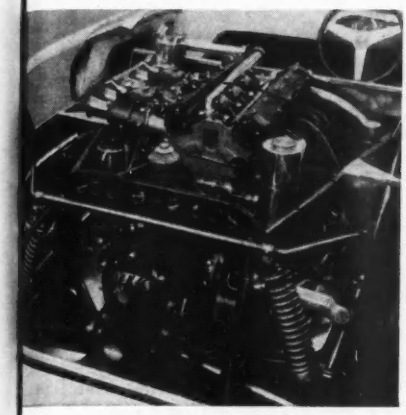
Because it is strictly a single-seater and carries a most ungainly-looking body, the Type 63 has been a subject of controversy among sports car enthusiasts ever since it appeared. However, it showed promise at Sebring, though it took home no trophies to prove it.

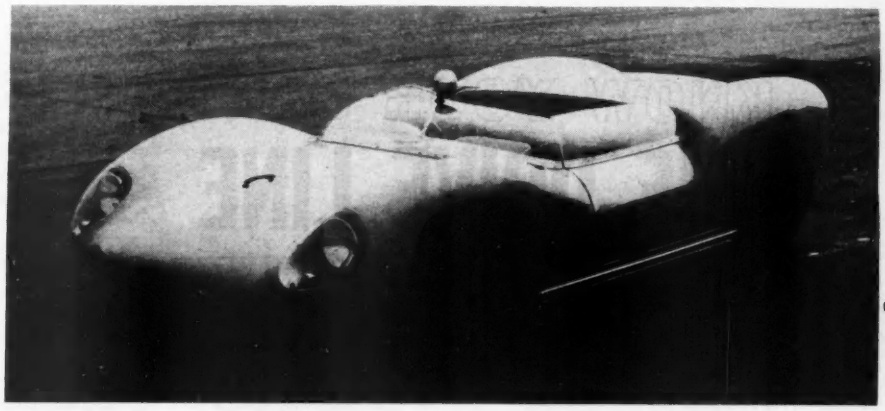
Rear-engined racing cars may soon be common beyond the borders of Europe. The appearance of the new John Zink Special at Indianapolis this year, Chevrolet's new CERV-I research vehicle and Lance Reventlow's latest Scarab are all evidence of interest on this side of the Atlantic. Indeed, what Porsche and Cooper started on the road circuits of the Old World might be just the fresh idea needed for the dirt tracks of the New. /MT



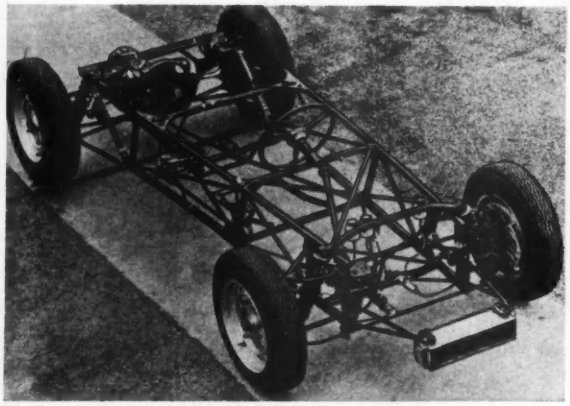


Maserati has its 176.3-cubic-inch, four-cylinder engine mounted aft of the cockpit in the Type 63, latest model of the famous "birdcage" competition sports car. Hidden by the maze of structural tubing that gives the car its unusual nickname, the powerplant delivers 255 horses at 7200 rpm. The driver sits at center in racing fashion.

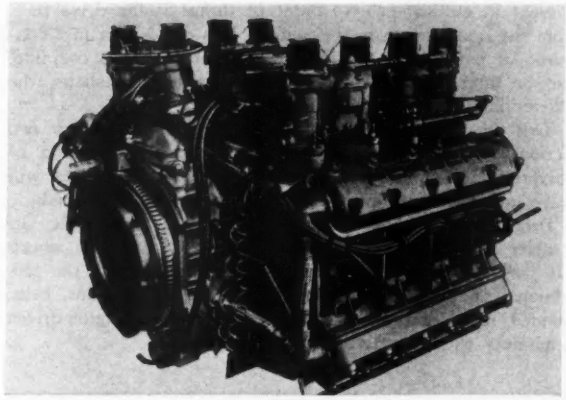




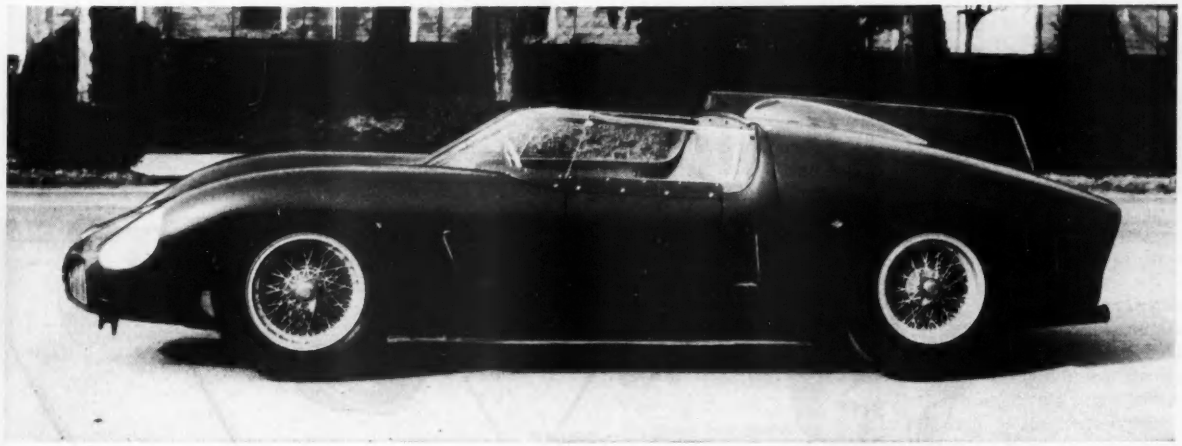
The Lotus Mark XIX is a striking example of how current sports cars are being influenced by rear-engined racing designs. Itself a competition machine, the Mark XIX is essentially just a two-seater adaptation of last year's Formula I Lotus. Like the 1959 and 1960 Coopers, it is fitted with a 152-cubic-inch Coventry-Climax powerplant.



Switching Lotus' procedure, a famed rear-engined sports car builder is preparing an all-new Formula I challenger. Above is the space frame of the 1961 grand prix Porsche.



An air-cooled, opposed eight-cylinder engine will propel the Porsche Formula I car. Displacing 91.4 cubic inches, it is said to have between 180 and 200 hp at 10,000 rpm.



One of the most promising of this season's rear-engined sports cars is the Ferrari Type 246. Like the Lotus at the top of the page, it is based on last year's Formula I design. Its engine is a V-6 of 147.4 cubic inches and 265 hp at 8,000 rpm. Ferrari has a conventional sports car for 1961 also, with the famed V-12 mounted in front.

KNOW YOUR CAR: THE DRIVE LINE

by Robert W. Temple

IT SEEMS AS THOUGH the "Know Your Car" series has been progressing somewhat like the song about interconnecting bones, but I suppose this analogy would be applicable to any description of a consecutive, connecting nature.

We have had a look at the engine and the process by which it converts fuel to power.

We have seen how this power is supplied to the transmission and how the transmission provides the progressive gear ratios to satisfy the varying torque requirements of the automobile.

Next in our consecutive order of things is the drive train from the transmission to the wheels. This drive train in a conventional automobile consists of a splined, sliding coupling, one or more universal joints, one or more driveshafts, the differential and the driving axles.

This chapter of the series will be broken down into two sections. Section I will concern itself with the function of universal joints and driveshafts, while the second section will delve into final drive types and the function of differentials.

Ever since the first crude versions of an automobile, the transfer of power from the transmission to the drive wheels has presented a thorny problem to engineers of both the professional and backyard variety. They have tried chains, belts, braided rope, friction discs, rubber bands and engine-driven generators with electric motors in the wheels.

Some years back I had a ride in a car in Detroit with true fluid drive. The engine had a series of hydraulic pumps attached to the business end. The pumps were of progressive capacities, thus serving as the progressive gear ratios in a transmission. The pumps were piped up with a couple of hydraulic motors in the rear wheels, and "gear" selection was by a fancy multiple valve. It worked, too.

We always seem to get back to driveshafts and universal joints, with all their attendant problems. I sometimes suspect that most drive line designers have a secret desire to just give up and go fishing; but this would necessitate automobiles without suspension systems. Who wants to ride in a two-ton version of a kart?

All is not lost just yet, however. If you think the drive line designers have quit trying, just trot out and take a good look at the Tempest.

To get down to the business at hand, we will start off with an illustration of a simple drive train as used with the ever-popular Hotchkiss drive. For the purpose of clarity, only the working parts of the drive train have been shown. The differential and axle housings have been eliminated.

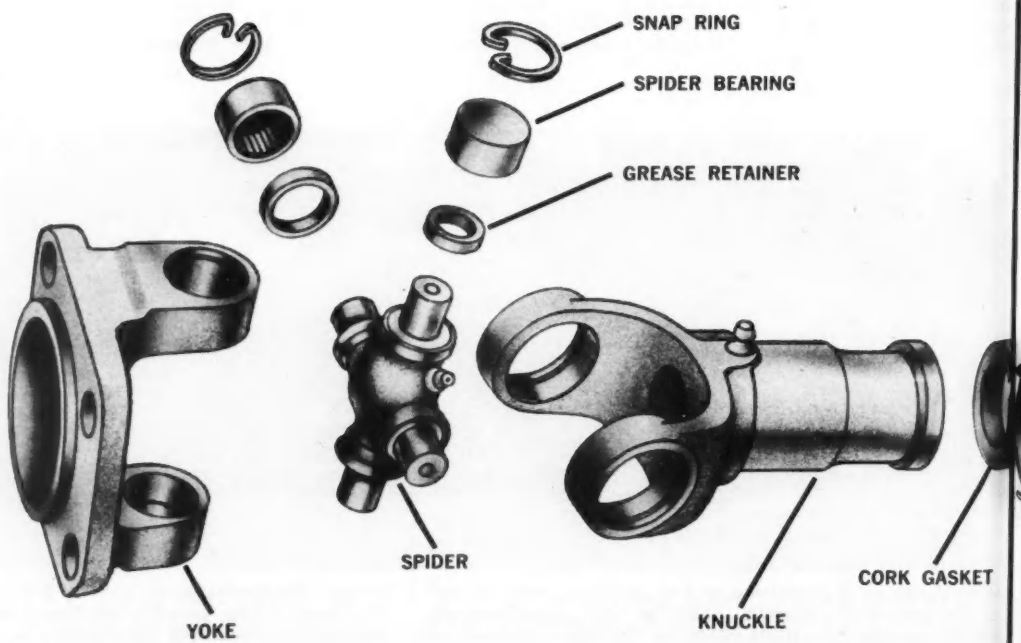
Fig. 1. A simple final drive train.

The front universal joint (1) transmits power from the transmission through a splined, sliding coupling (2), to the driveshaft or propeller shaft (3). The propeller shaft has a second universal joint (4) attached to its rear end, and this joint in turn is keyed to the pinion shaft (5) of the differential. The pinion gear meshes with a mating ring gear, which is bolted to the differential gear cage (6). Power is then transmitted through the gears in the differential to the driving axles (7) and thence to the wheels.

Fig. 2. A disassembled universal joint.

A universal joint is a flexible coupling which permits one

Figure 2



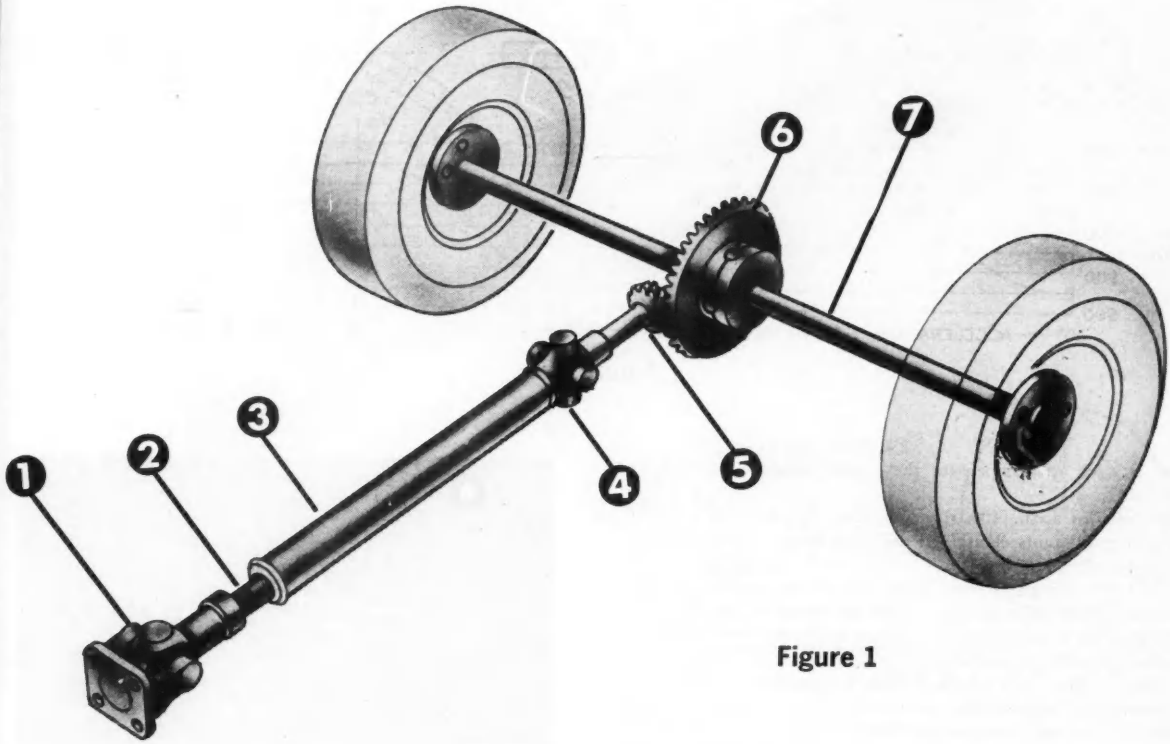


Figure 1

shaft to drive another at an angle to it. Most automotive universal joints are of the conventional type, consisting of three fundamental units — one cross-pin or spider, and two yokes. The two yokes are set at right angles to each other, and their open ends are pivoted on the spider.

This construction allows each yoke to pivot on its own axis on the spider, while permitting transmission of rotary motion from one yoke to the other. Because of this action, the universal joint transmits power from the transmission through the driveshaft to the rear axle despite the fact that the transmission is mounted more or less rigidly in the frame, while the rear axle constantly moves up and down in relationship to the frame.

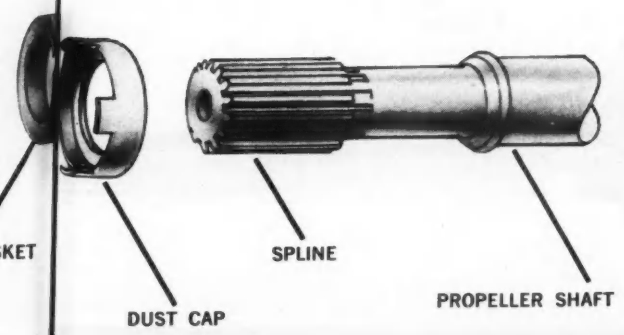
Due to rear suspension pivot points, and to the fact that springs deflect upon compression, the rear axle follows a path different from that described by the swinging propeller shaft as it pivots on the front universal joint. This results in constant variation of the dimension between the rear axle and the transmission while the car is in motion.

In order to provide a continuous flow of power under these circumstances, a splined, sliding coupling is incorporated in the driveshaft and universal joint assembly. This may also be seen in **Fig. 2.** The function of this sliding coupling, or slip joint, is shown in **Fig. 3.**

A peculiarity in the operation of a conventional universal joint is cyclic speed variation. This is in the form of an acceleration and deceleration of speed twice during each revolution, when the joint is operating at an angularity between the two ends. The cyclic speed variation increases as the angularity of the joint increases. The fluctuation amounts to roughly seven per cent for a 15-degree joint angularity and about 30 per cent for an angle of 30 degrees. Fortunately, automotive driveshafts seldom reach these operating angles.

Probably the easiest way to illustrate this speed variation would be to chart the varying speeds through one complete revolution at a set speed and angularity. This has been done in **Fig. 4.** For demonstrational purposes, we will use a driving shaft speed of 1,000 rpm and an exaggerated angle of 30 degrees. The resulting speed fluctuation of the driven shaft is shown by the undulating line across the chart.

This variation in speed cannot be eliminated with one simple universal joint, but can be minimized by using two universal joints, one at each end of the shaft. In this manner, the second



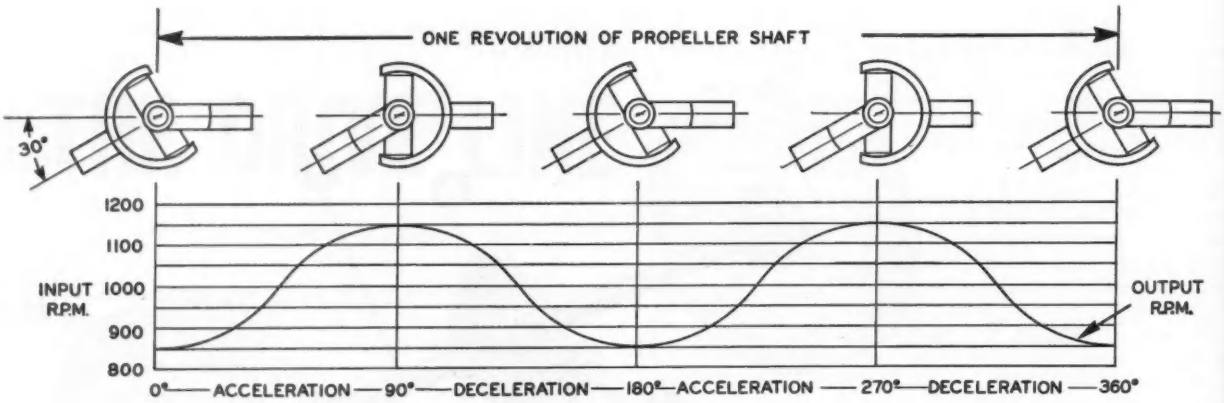


Figure 4

joint is used to compensate the speed variations caused by the first.

In order to accomplish this end, the joint angularity of the two universal joints should be the same at any given moment as illustrated in **Fig. 5.**

The two universal joint yokes which are attached to the driveshaft must be in the same plane as shown in **Fig. 6.**

With this arrangement, the front universal joint produces its maximum fluctuation as the rear joint produces its minimum fluctuation. The speed of the propeller shaft between the joints is constantly changing, due to the action of the front universal joint, but we have non-varying wheel speed for a given engine speed, due to the compensating action of the rear universal joint.

If you have ever separated a drive line at the slip joint and then reassembled it with the front joint yoke at a right angle to the rear joint yoke, you now know why you experienced boogie-woogie from beneath your floor pan. You merely elimi-

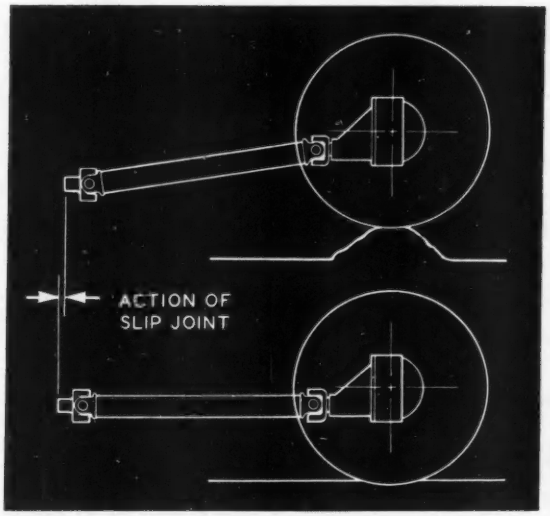


Figure 3

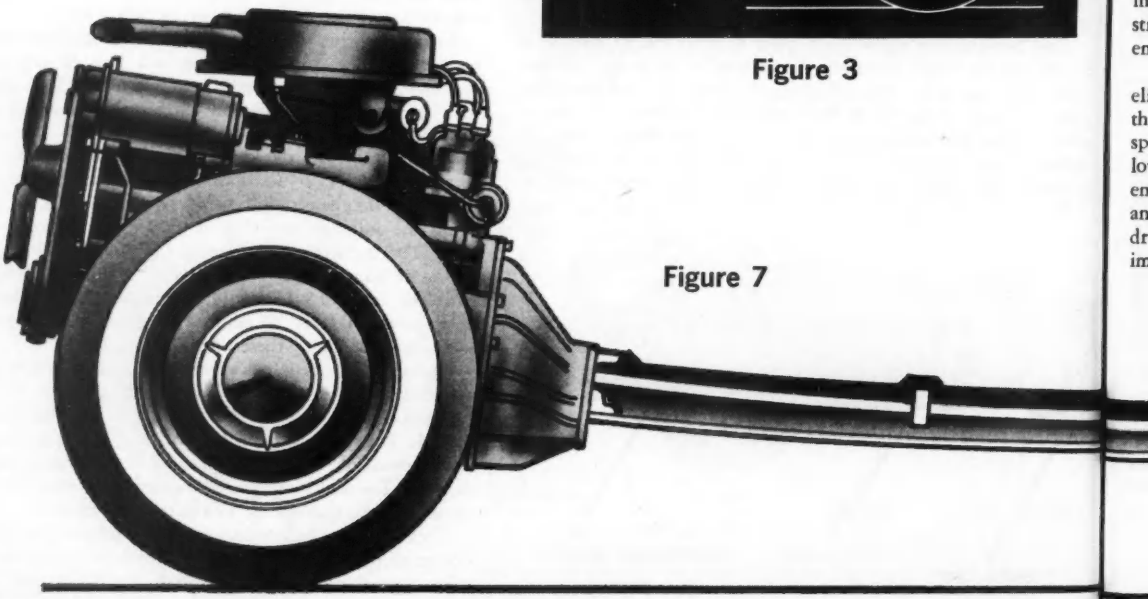
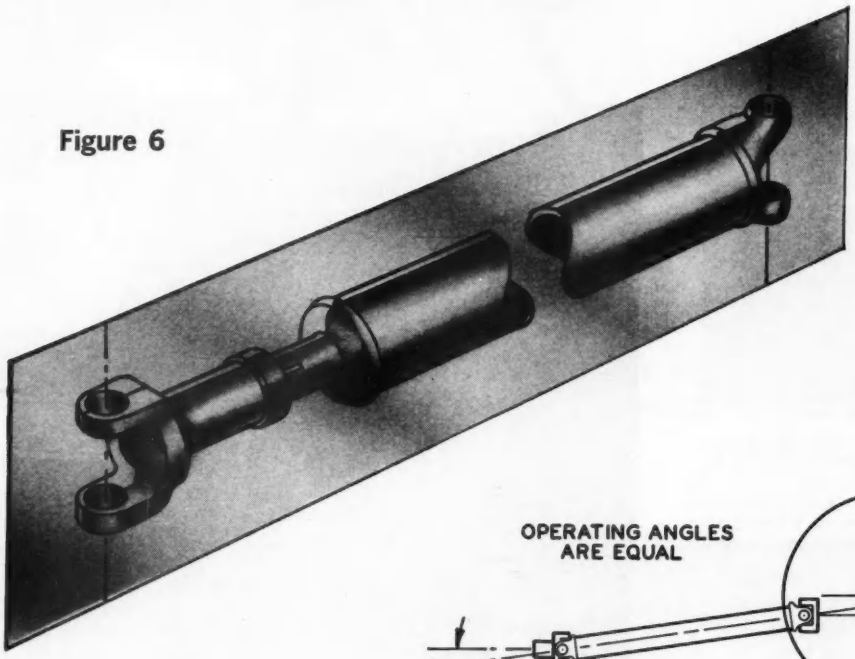


Figure 7

Figure 6



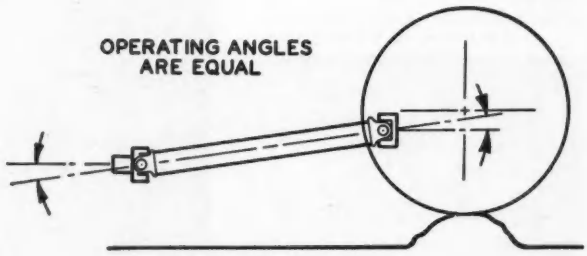


Figure 5

nated the compensating action between the two universal joints.

You can see why drive lines are responsible for many of the headaches in automotive engineering. They are a continual source of trouble, due to the difficulty of maintaining balance and silence of operation through long shafts operating on the multiple pivot bearings of the universal joints.

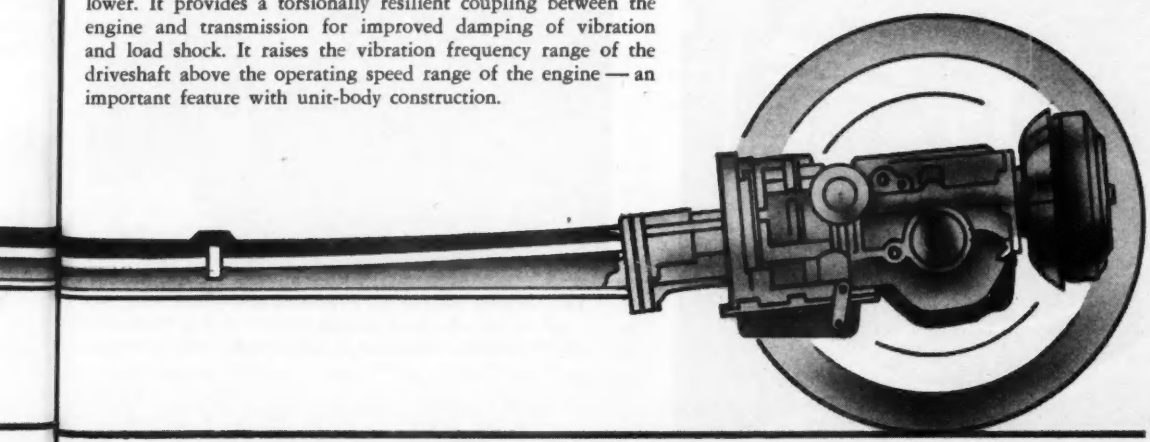
The most recent method of circumventing these difficulties is evidenced in the Tempest driveshaft. This driveshaft is flexible and operates in a curved position **(Fig. 7).**

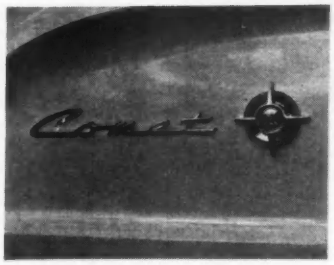
The engine and transmission are mounted front and rear, respectively, in a unit-body structure. The only angularity involved in the operation of the shaft is that designed into the structure and that deriving from fluctuations in the resilient engine and transmission mountings.

The Tempest driveshaft achieves several goals. It virtually eliminates the driveshaft hump in the floor because it follows the floor contour. It eliminates universal joints at the high-speed driveshaft and puts them on the axles, where speeds are lower. It provides a torsionally resilient coupling between the engine and transmission for improved damping of vibration and load shock. It raises the vibration frequency range of the driveshaft above the operating speed range of the engine — an important feature with unit-body construction.

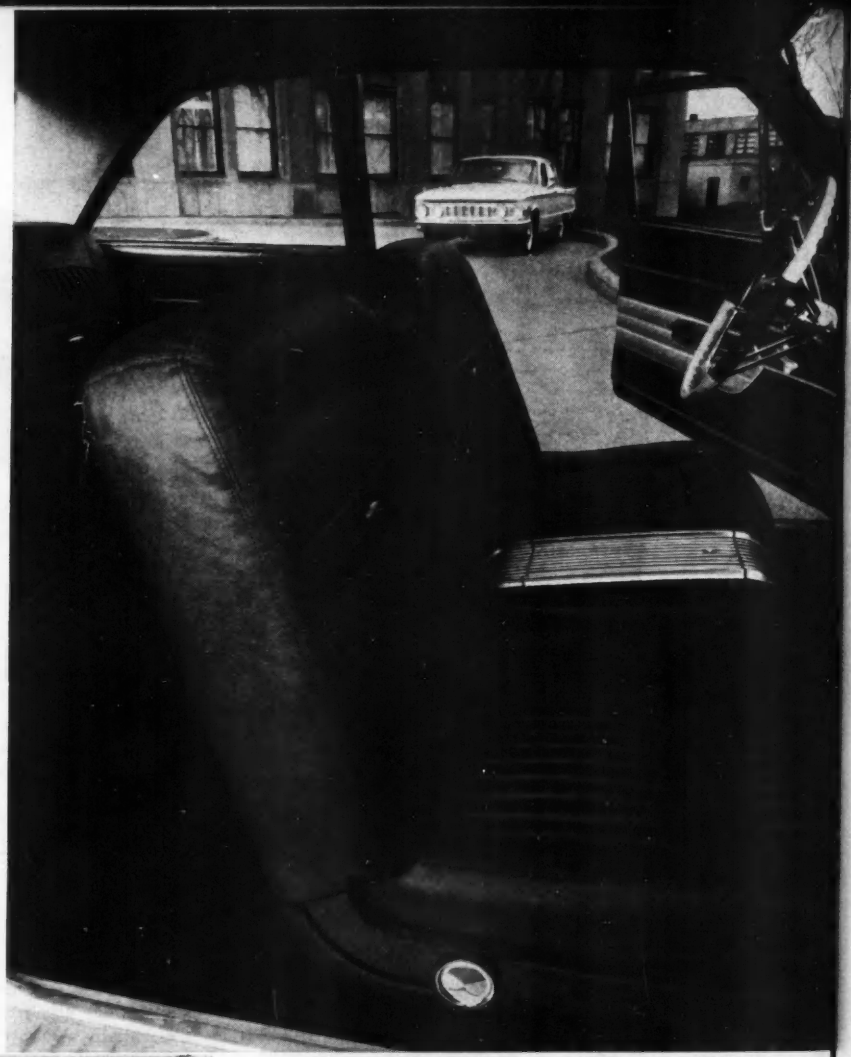
How does this driveshaft operate in a "bent" position? Well, things aren't quite as bad as they look. This driveshaft is essentially a long torsion bar. If supported at the ends only, this bar would sag in the middle, but still revolve freely in this sagged position.

Tempest merely takes advantage of this fact and makes sure the shaft retains this position by using a couple of locating bearings along the shaft. Sure there is a reversal in stress each time the shaft revolves, but don't lose sleep over it. This stress is insignificant in comparison to the torsional stresses which the driveshaft is designed to withstand. /MT

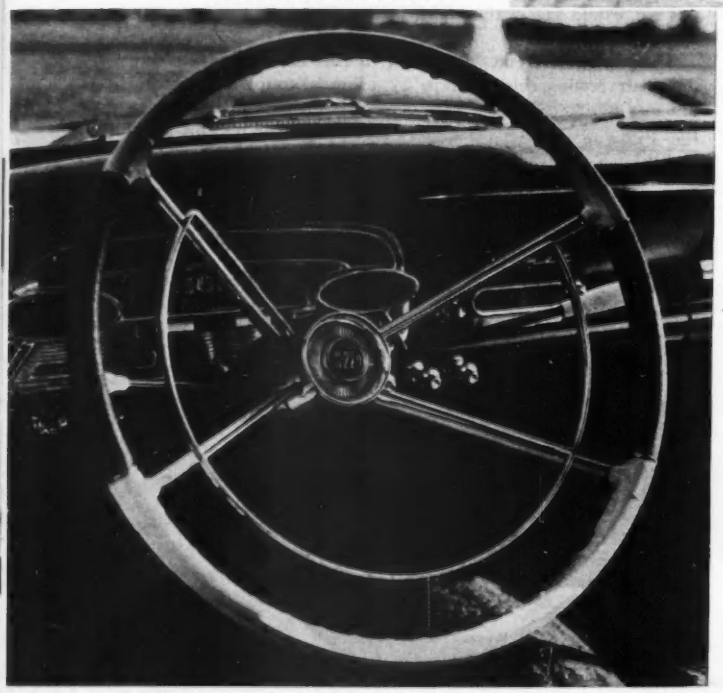


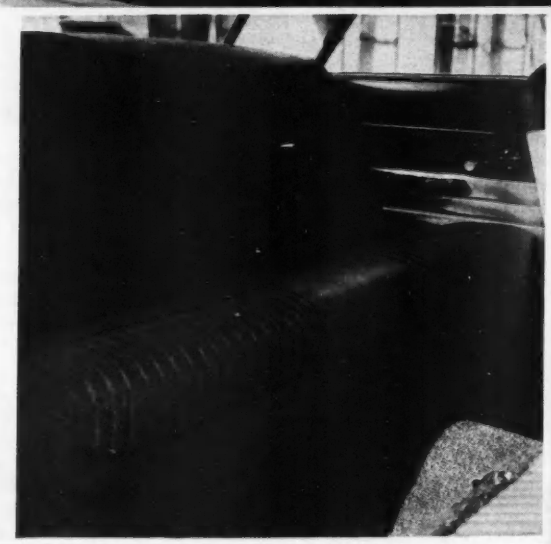


The Comet S-22 insignia (above) now identifies new version of the popular compact that has as its principal feature a semi-bucket-seat interior, with a T-Bird-style console dividing the seats.



Steering wheel has a sports-car flavor, with vinyl hand grips. The Comet dash is unchanged in the new S-22 version.





The rear seat of the S-22 remains the bench type, but pleats have been employed to provide a semi-bucket effect. Special carpeting and side panel trim are used.

THE NEW COMET S-22

A DRESSED-UP VERSION OF AN ECONOMY COMPACT CAR THAT HAS ALWAYS OFFERED A LITTLE MORE IN LUXURY

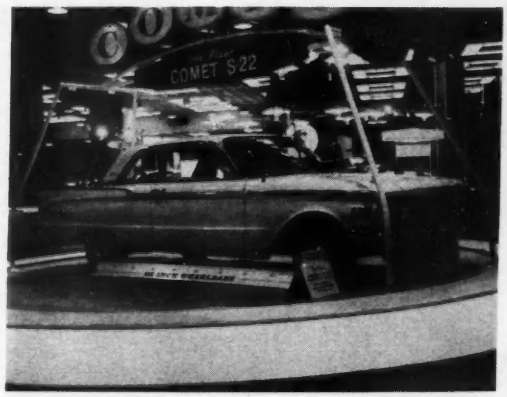
ONE OF THE LATEST of the compact cars to appear in a slightly sportier bucket-seat version is the Comet. Its glamour model is called the S-22, the designation having been arrived at for no known reason. While this has no direct bearing on the car itself, it nonetheless somehow sounds fitting.

The S-22 is based on, of course, basic Comet components. There are no alterations in the power train or running gear. The same options offered at extra cost on the standard Comets are optional on the S-22. The most important of these, obviously, are the choice between an automatic and a manual transmission and a selection of two six-cylinder, in-line engines, one of 144 cubic inches rated at 85 hp, and the other of 170 cubic inches rated at 101.

The Comet S-22, as are the regular-line Comets, is identical in most respects to the corresponding Falcon Futura, and standard Falcons. When the Comet was first introduced a little more than a year ago, this similarity was regarded as an almost fatal handicap, particularly with the Comet pegged at a slightly higher price. To give credit where credit is due, however, this has bothered the Comet least of all, and the car unquestionably is one of the great successes in the compact field. The little extra it has to offer over the Falcon is very obviously what several hundred thousand car buyers want.

Among the new compact cars at least, the Comet may be generally regarded as the pioneer luxury compact. And this is what sets it apart from the Falcon — with the S-22 being a further step in that direction. The Comet differs from the Falcon physically in only two major respects: it is a bigger car, about 14 inches longer overall on a four-inch-longer wheelbase; and it is fitted out with more detail touches of luxury — a little more chrome, more trim and similar deluxe touches. From a driving standpoint, the Comet rides a little smoother, gets a couple less miles per gallon of gas, has slightly slower performance – and that's about all. The advantages against the disadvantages of buying a Comet versus a Falcon are easily weighed. It's the old story of a little more luxury as opposed to strictly functional considerations.

In reporting upon the S-22, more to the point are the differences it has from the standard Comets. The front bench seats have been replaced by the semi-bucket type, which have been contoured by some four inches of foam padding. While this detracts from the carrying capacity of the car, it does add a good degree of individual comfort. Between these separated seats is a steel console that has a hinged cover which opens to a small package compartment. The influence here is, of course, the Ford Thunderbird.



The rear seat remains the bench type which uses a pleating effect to simulate the bucket idea. The carpeting and upholstery are special for the S-22. Similar restyling has been used on the door panels, armrests and steering wheel, which now adopts the sports-car theme by vinyl-covered grips.

The exterior alterations, aside from appropriate identification symbols, have been limited to chrome trim, disc wheel covers and white sidewall tires as standard equipment. One other refinement, not on the surface, is the use of some 50 pounds of additional sound-deadening material, which will further the quiet luxury feel of the car.

The photo above shows the car on the stand at the recent New York auto show, the occasion for its initial appearance. The Comet S-22 comes only as a two-door and the price, which had not been reported at the time this is written, probably will be about $250 over the price of a comparable standard Comet — and very likely less than $100 more than the Falcon Futura.

Since the Comet car buyer in the past apparently has been the kind of individual willing to pay a little more for a little more, it could very well follow that the Comet S-22 will enjoy a degree of success far greater than anyone expects. /MT

MOTOR TREND CLASSIC:

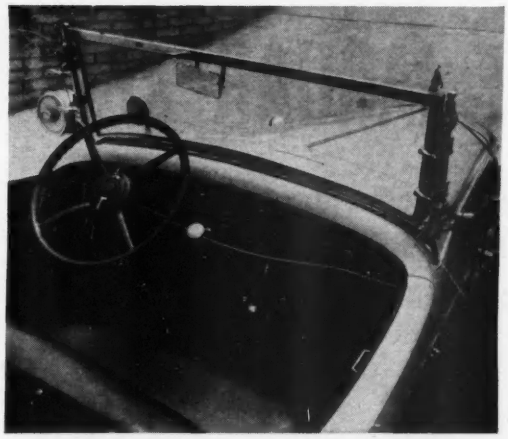
Photo Story by Ralph Poole

1930 Cadillac Roadster

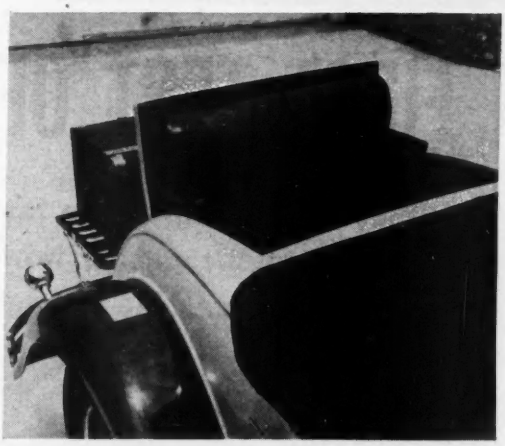
One of the robust breed that is now extinct. But it was a man's car — big, strong and meant for sports

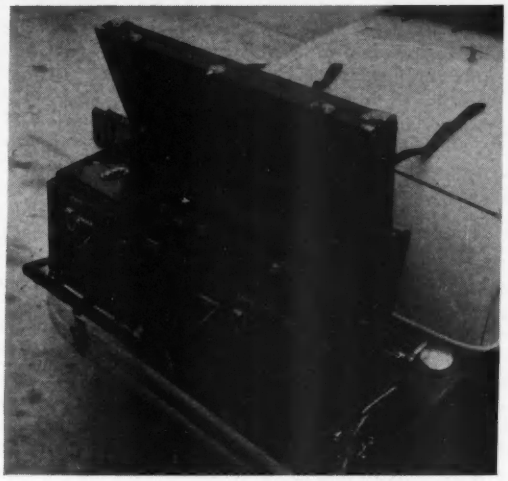
IN THE LONG, long list of classic cars, there are very, very few names that remain today on the active manufacturing roll. One of these, quite obviously, is Cadillac. Indeed, it has been pointed out by some eminent authorities that the reason why Cadillac could have been a classic car, at one time, and survived, was the fact that it was made by General Motors. In its day as a classic it was unnecessary for Cadillac to be a profitable make of car, since it could be supported by the other GM divisions, such as Chevrolet and Buick and so on. Other and perhaps better cars lacked these helping financial hands — and so they died. Today Cadillac's only companions from the classic era are Lincoln Continental and Chrysler. No one else is left. It is also interesting to note, and it should not be stretching history too much to offer this conclusion, that the magnificent reputation Cadillac owns today as a motor car, while not born in the classic period, certainly was developed further in that era. The makers of Cadillac in the present 1960's need not create an image for the car, they need only to preserve it. Actually, of course, the prestige of Cadillac began in the first decade of this century,

Cadillac roadster had high-riding bench seat, floor shift, hand brake and spotlights. Present owner is Lynn Mayfield of La Jolla, California.

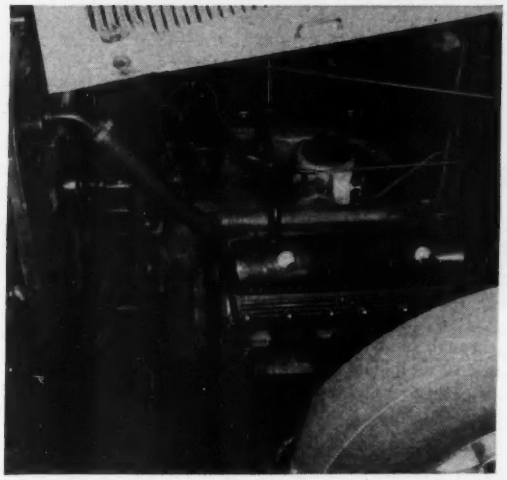


Deck lid flipped open to form rumbleseat, where ride was as thrilling as motorcycle or open-cockpit plane. There was special compartment for golf clubs.





Trunk on rear luggage rack held matched and fitted suitcases. The actual capacity is as great as some of today's cars and more than many sports cars.



Engine was flathead V-8 that put out 95 hp to drive the 4600-pound car through a three-speed transmission. Massive roadster had 140-inch wheelbase.

about 1908, when Leland and Cadillac won England's Dewar Trophy for design excellence. Four years later Kettering gave it the first self-starter and, then, in 1914, came another climax with the first production V-8 engine. Ten years later, the car had been established as a luxury make and in 1926 its bodies began to be built by Fleetwood. In 1928, the V-8 engine of 1914 was redesigned and it was this engine that went into the roadster that is shown on these pages. Just two years later, in 1930, when the roadster here was manufactured, Cadillac also brought out the V-16 — and then in another year the V-12 was also introduced. It was not long after this that the classic cars entered into the decline from which they have never recovered. But rather than go into that well-worked subject here, it is particularly interesting to return to 1930 and take another look at the car that the progressive development of luxury has passed by. That car is the 1930 Cadillac Roadster, a type that no longer exists in pure form — and this unquestionably is regrettable. Today the roadster's place among domestic cars is flanked on one side by convertibles and on the other by sports cars. But there is nothing in between, except for what is made in Germany and in England. The roadster was unquestionably a man's car — rough, strong, vigorous and straightforward. There were occasional concessions to comfort and utility, but never to softness or frills. And in the higher-priced and exclusive category, which ultimately became the classic car class, the roadster was something very special indeed. Like the touring car, it had a kind of prestige of its own that not even the most luxurious hardtop limousine or town car could match. And yet, despite all these favorable attributes, the roadster eventually accompanied all the other fabulous cars that were to become classics into manufacturing oblivion. Perhaps some day the roadster concept in undiluted form will be resurrected by some imaginative automobile manufacturer in America. But until that happens we have only the noble classic roadsters and their lesser bourgeois contemporaries to admire and respect. They are a breed that never should have become extinct. Not necessarily because they were better cars, but rather for their robust spirit and the fact that they simply were fun to drive. /MT

DRIVER'S REPORT:

A FIRST TEST OF THE JAGUAR XK-E

They say it's one of the fastest series production cars ever offered to the public. Now a MOTOR TREND staff editor has put the machine through the gears against a stop watch

by Gordon Wilkins

JAGUAR'S REPUTATION was established by performance. The new E-type Gran Turismo is a formidable example of this tradition. It is unquestionably the fastest car to be made in quantity and offered to the public as a package. It handles and performs like a racing car, but is equally at home on the highway as a more docile passenger car.

The car I drove for this test was the fixed-head coupe — a long, low, lean machine which is physical proof that aerodynamic efficiency has obviously taken precedence over studio styling. For instance, the luggage trunk could have been larger if the underside of the tail were not swept up so sharply, but wind-tunnel tests showed that the drag would be increased, so the rising line remained. Things like this are evident throughout the car, and the XK-E is truly dedicated to performance.

A film record of the speedometer while I was driving out of town through mixed traffic shows the needle oscillating between 60 and 110 mph. The car will leap from 60 to 100 mph in 9½ seconds — just a few hundred yards of clear road. Standing-start acceleration is good too, as can be seen by these figures: 0-30, 2.9 seconds; 0-50, 5.2 seconds; 0-60, 7 seconds; and 0-100, 16.4 seconds. For the quarter-mile the XK-E finished at 14.9 seconds.

Excellent acceleration is only part of the story, and high-speed performance is extraordinary for a production car. At 100 mph I was still in third gear, ready to shift into top, with the tachometer touching the red sector which indicates 5500 rpm. It seems clear that the 150 mph estimated top speed is no exaggeration. The weekend traffic was too heavy for me to get a clear maximum speed run, but several times the speedometer went past 140 mph, with the car still accelerating strongly. With the optional 2.93 axle ratio, calculations show that the car should exceed 170 mph — and it probably will!

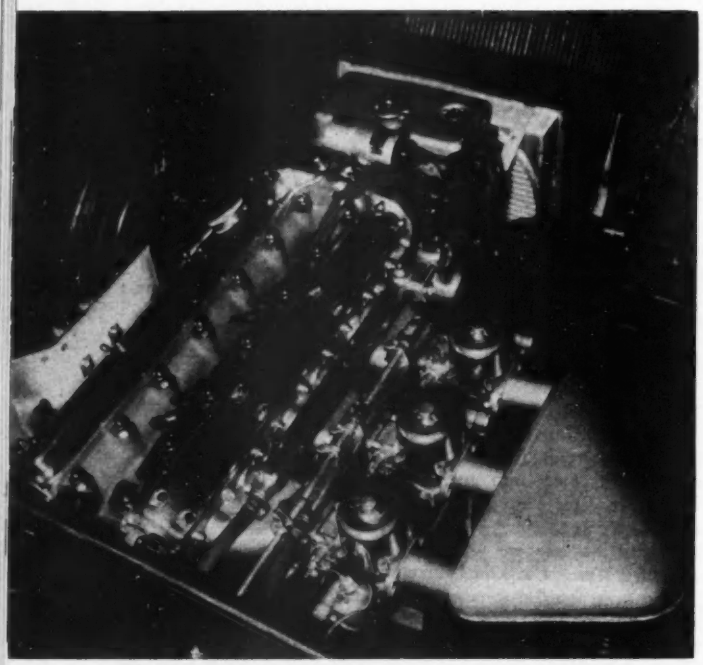
Although reactions to the performance are generally enthusiastic, there are mixed opinions about some other features of the car. Some feel that headroom, ease of entry and interior space have been sacrificed to streamlining. While this would be justified in a machine designed solely for competition use, it diminished its attraction for normal road work. Luggage space on the roadster is limited, and although the coupe has space inside, the luggage is in full view of passersby.

The wood-rimmed steering wheel is set at a good angle, and the column can be shortened to permit an extended-arm driving position without restricting kneeroom. Pedals are better arranged than on earlier Jaguar models, and heel and toe on brake and accelerator when shifting down before a corner is far simpler. All-around vision is free, thanks to the slim pillars, but the dropping line of nose and tail prevents the driver from seeing the extremities of the car.

The engine is surprisingly quiet, and no brutal methods are needed to obtain maximum acceleration – just hold the engine at about 2,000 rpm and drop the clutch in. There is a brief squeak from the tires, then the limited-slip differential takes charge and the car streaks away as though rocket-propelled.

The engine is so flexible that there is no need for gear changing in ordinary driving. In top gear the E-type will accelerate from 10 to 30 mph in about 5.7 seconds; 40 to 60 in 5 seconds; and 80 to 100 in about 5.7 seconds. This is particularly appreciated, as the gearbox, which is continued unchanged from previous models, is not the best feature of the car.

With this kind of acceleration, high speeds can be reached wherever there are a few hundred yards of clear road and in safety, for the brakes match the performance. They are Dunlop



The new Jaguar's in-line six-cylinder engine is rated at 265 hp; it is capable of speeds in excess of 170 mph. Note unusual air cleaner.

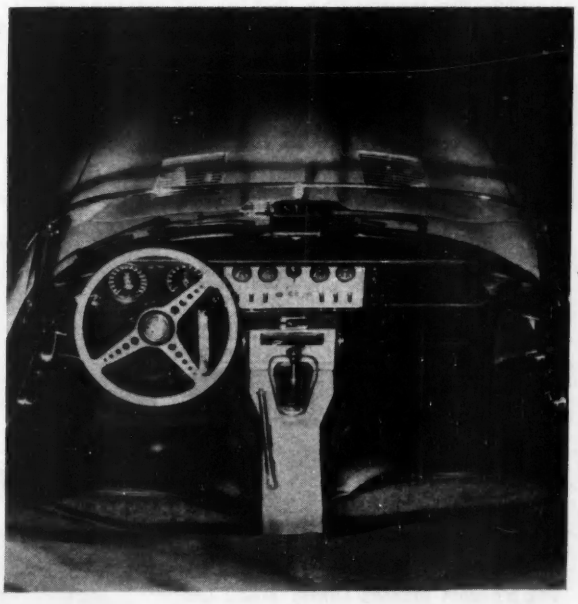
MT'S EUROPEAN EDITOR IN LONDON, GORDON WILKINS, WAS AMONG THE FIRST TO DRIVE THE SLEEK NEW E-TYPE GRAN TURISMO.

discs with a vacuum servo based on an American Kelsey Hayes design. Press firmly on the pedal at 100 mph, and the speed just melts away. Several times in succession I stopped the car from 100 mph in five seconds, which is close to the theoretical minimum possible. The XK-E came to a straight-line stop with no tendency to lock the wheels until the speed dropped below 35 mph, when a little skill had to be used to avoid locking the wheels and provoking a slide. Pedal pressure was reasonably light, and, of course, there was no trace of fade after repeated crash stops from high speeds.

Road holding is superb — the best on any Jaguar to date. Cornering fast, there is a small and consistent amount of understeer. With so much power available, the tail can be brought around by the throttle, but a driver accustomed to fast cars can control the angle, without having to learn any new tricks.

Two features will certainly cause a pleasant surprise: the quiet running and the riding comfort. Engine and mechanical noises have been damped down successfully, and wind noise does not intrude much below 100 mph. On the test car a slight rumble was caused by exhaust resonance when cruising at 100 mph. This is a function of exhaust pipe length, which is very critical, and a slight modification is reported to have eliminated it on later models. Riding comfort over all types of surface is outstanding for a very fast sports model, and it is a car in which one would look forward to traveling several hundred miles a day with little fatigue.

The XK-E, in my opinion, is the best thing Jaguar has ever done, and at prices only slightly higher than those of the XK models— $6095 for the roadster and $6320 for the coupe. /MT



Some drivers will find entry into the low car somewhat difficult, but once there, will be greeted by well-appointed, roomy compartment.

FOR MEN ONLY

CORVAIR'S NEW CONCEPT IN PICKUPS

by Bob Ames

FOR MEN ONLY is a new department for MOTOR TREND but the subject matter has always been my own particular specialty. Each month this column will report on the type of cars that appeal mostly to men: four-wheel drive, pickups, and specialty vehicles. It will not be limited to cars alone but from time to time will bring up to date the new trends in trucks and cars, sportsman's equipment such as pickup campers and trailers, plus technical tips on mechanical and driving problems.

Of the new compact truck lines, the Corvair 95 models are the most radical and interesting. Many of their features are bound to be copied by other lines, in fact, some already have.

The most unusual Corvair 95 is the truck driven for this report, the Rampside. The new series is powered by the 80-hp, air-cooled Corvair Six and transaxle unit both mounted in the rear. Other radical features for the truck field are unit-frame body, independent suspension on all four wheels and almost equal weight distribution between front and rear wheels.

The Rampside gets its name from its side loading door. This gate is a ramp and loads may be wheeled or carried into the cargo box. Since the engine is in the rear, it was possible to lower the cargo floor in the middle of the truck to 14 inches. If the Rampside is parked at an eight-inch curb the load must be raised only six inches.

This makes the ramp loading door exceptionally practical and it is undoubtedly the most important single new pickup truck development in twenty years. One man can load or unload a stove, ice box, freezer or similar item by himself. If the load is too heavy he can stop on the ramp and brace the wheels on the ribs of the ramp, another excellent advantage. The importance of the side loading ramp might be overlooked by many persons. But to the small business man who must deliver heavy items such as furniture, it is exceptionally worth while. Ordinarily one man can load an item at the store where a dock is often available — but two men must be sent to get it off the truck. Not with a rampside, however, and delivery charges can be virtually sliced in half.

The Rampside has an excellent payload, for a light truck, 1900 lbs., with a GVW of about 4600 lbs. The pickup bed is grain tight and will carry 80 cubic feet. This translates into almost 65 bushels and makes the rampside useful around

an average-size farm. The tailgate is well braced and will take a carton 47.5 inches wide.

The cargo compartment is not level and rises in the rear to accommodate the rear-mounted engine. It is higher than a conventional pickup bed, 26.5 inches, but any loss in capacity is more than gained back by the lower portion in the middle. For those who want it, an optional wooden floor making the cargo compartment flat all the way back is available. This will be ideal for some purposes since the area under the floor then becomes available to store tools, etc., that might be needed before the truck is unloaded.

The overall handling characteristics of the Rampside are superb, loaded or unloaded. This is something that is rarely true of a pickup. Since the weight is divided equally the truck handles as well as a Corvair sedan, although those who have never driven a forward control vehicle will at first swear it doesn't. Loads can be hauled in the center section where they maintain a low center of gravity and keep the weight equally divided between front and rear. Due to the rear engine the noise level in the cab is exceptionally low, quieter even than in many sedans.

Performance is not outstanding but is ample for normal driving. The automatic transmission with which the test truck was equipped has a higher numerical axle ratio than the sedan but still lacks much of a punch for passing power. With the automatic the Rampside is an excellent stop-and-go vehicle even though it suffers from the lack of a park position and the brake must be set at each stop. For anything but S-and-G the three- and four-speed manual transmissions will be more efficient and economical.

The forward control cab is well furnished with excellent assembly quality. Instruments are at a minimum and it seems that a pickup should have accurate gauges instead of warning lights. The materials are durable but their quality is only average for pickups.

Major service jobs are going to be relatively simple on the Rampside. The complete power package, including engine, transaxle and rear suspension, can be removed as a unit. Similarly the entire front suspension can be removed with the front cross member. For minor servicing the rear cargo compartment floor comes up, and oil changes, etc., can be made through a small door in the rear. The 18-gallon gas tank is located under the seat and the spare tire behind the seat back.

Overall the Corvair Rampside is not just another forward control pickup — it is a whole new concept in pickups. Chevrolet has proved that the rear engine can come into its own in a forward control pickup. There is no pickup quite like the Rampside and for many jobs it is far better than any other domestic truck. /MT

When You Change Your Address

You won't want to miss your **MOTOR TREND MAGAZINE** when you move to your new home — so please tell us, well in advance, what your new address will be. "It isn't enough just to tell the post office, for they won't forward your copies unless you pay extra postage." When you write us, be sure to give us your old address too — even better, enclose the address label from a recent issue.

Write to MOTOR TREND MAGAZINE, 5959 Hollywood Blvd., Los Angeles 28, California.

CAR CLINIC

by Barney Navarro

Another new feature beginning in this month's MT is Barney Navarro's Car Clinic. One of the most experienced writers in the field, Navarro will answer readers' technical questions each month. Your letters are invited.

LOWER COMPRESSION

I have put a 1956 Ford 312-cubic-inch engine in my Ford truck. It makes a real performer but has a little too-high compression ratio (9.7-to-1).

What is the cheapest and best way to lower the compression? Is there anyone who makes low-compression pistons for this engine?

Wayne Slonaker Palouse, Wash.

Lowering the compression ratio of a modern engine isn't recommended, since the expense far outweighs the benefits. A set of low-compression pistons can be ordered from a custom piston manufacturer, but their cost will be so high that you will never be able to reconcile the expenditure against the savings resulting from the use of regular gas.

In addition to the piston cost, you will need new rings and a balance job. If the special pistons weigh slightly more than the originals, you may be able to "pare" them down to stock weight; if they weigh less, a complete engine balancing job will be in order.

ENGINE SWAPPING

I own a 1954 BMW with a 76-hp, six-cylinder engine, which I want to swap for an American engine.

I am considering a Pontiac four-cylinder engine that produces about 120 hp at 4400 rpm or the new Buick Special V-8 aluminum engine that produces 155 hp at 4400 rpm.

Can you offer any advice on which engine I should choose and how I should go about adapting it to my BMW transmission?

Darl D. Bennett Fort Knox, Ky.

The high weight of the Pontiac four-cylinder engine would not make it a good choice for your BMW. The Buick-Pontiac aluminum V-8 is almost half the weight of the Four, so it wouldn't make the car nose-heavy.

Uncommon engine adaptations always tax the resourcefulness of the enthusiast. It is very doubtful that you will be able to find anyone that can offer step-by-step advice. You will just have to obtain an engine and make the necessary parts to join it to your BMW transmission.

OVERHEATING

Is there any possibility that a bad wheel bearing, or poor alignment can

cause an engine to overheat?
George Burditt
Fredericton, N. B., Canada

It is possible, but not probable. If you have a car that has a marginal cooling system (and it would have to be very marginal), there is a remote possibility that the extra drag produced by poor wheel alignment or a bad wheel bearing could be "the straw that broke the camel's back." In order for either or both of these defects to noticeably affect the operating temperature of a car with a marginal cooling system, tire and wheel bearing destruction would have to be very rapid.

LEAKY REAR MAIN

I have been told I have a leak in the rear main bearing of my 1955 Plymouth, with automatic transmission. Sometimes the oil leaks out and sometimes I don't need oil for weeks. Could this be the rear main?

Estimates have run from $15 to $150. Is this so important to repair, and what should an approximate cost be?
C. Rimmer

The variations in estimates concerning the rear main bearing leakage could depend on differences of opinion as to the specific reason that the bearing is leaking. The man that gave the $15 estimate may be assuming that replacement of the seals in the cap of the rear main may be at fault. Such a repair is simple and only requires removal of the pan and rear main cap. If the crankshaft is badly worn or the surface on which the crank seals ride is scored, engine removal may be necessary to effect a repair.

Inconsistent leakage can be the result of differences in the manner of driving the car. Poking around town may not cause leakage, but storming down the highway at high speed will aggravate the condition due to greater oil flow, higher oil temperatures and greater crankshaft vibration.

Whether or not the leak is worth fixing is a matter for you to decide. About the worst effects that the leak can produce is to waste oil and soil your driveway and garage floor.

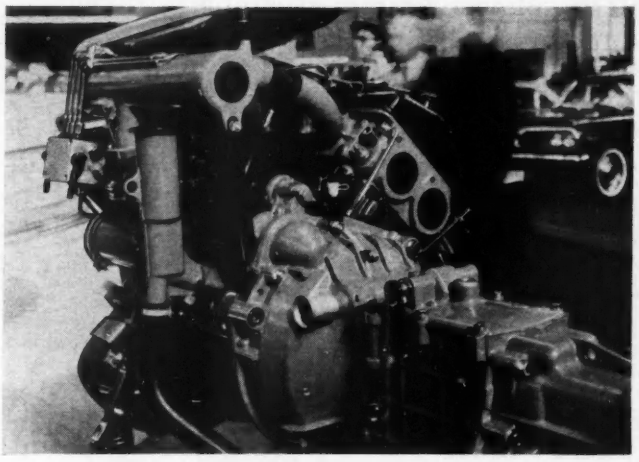
WHAT DOES IT STORE?

Does an automobile battery store electricity? Also, how does a battery function?

When I was attending a "G.I." school some years ago, our instructor informed our class that the only part on a motor vehicle that stores electricity is the condenser.
W. A. Anderson

You were correctly informed by your G.I. instructor — a battery stores nothing but chemical energy. The chemical reaction between the sulfuric acid and the

continued on next page



New Cars in Europe

Geneva

PEUGEOT Early in 1962 Peugeot may make the 404 sedan available with fuel injection, illustrated above, instead of the present carburetor system. The injection system, developed in collaboration with Kugelfischer Schafer & Company of Munich, uses a four-plunger pump injecting fuel into the inlet ports. Installation was not a difficult engineering problem, since the 1.6-liter Four is canted at a 45-degree angle. This engine has hemispherical combustion chambers with inlet exhausts on opposite sides, making it simple to mount the pump unit close to the air throttle. Compression ratio has been raised from 7.2 to 8.5-to-1, and maximum power is now 85 hp at 5500 rpm, an increase of 12 hp. The fuel-injected engine raised the torque to 101 lbs.-ft. at 2800 rpm.

CITROEN The spring motor show at Geneva was the first public appearance of the refined Citroen DS-19 with a more powerful engine. Compression ratio on the four-cylinder, 1971 cc, push-rod engine has been raised from 7.5 to 8.5-to-1. There are new domed pistons with chromium-plated upper rings, and the crankshaft now has a vibration damper at the rear end. Horsepower has been boosted from 74 to 84, with no increase in the rpm at which it peaks. Torque, now 109 lbs.-ft., is 11 per cent higher.

FACELLIA With the start of export deliveries, Facel Vega will offer a selection of three types of coachwork with two versions of the four-cylinder, twin-cam, 1.6-liter engine. Bodies are a two-seat coupe and convertible, plus a four-seat coupe. The standard engine, F-2, produces 113 hp at 6400 rpm, with 1648 cc displacement and a compression ratio of 9.4-to-1. Another refinement is the addition of servo assistance for the Dunlop disc brakes on all four wheels.

A dual-carburetor version of this same engine is available as an option. This engine, the F-2-S, produces 123 hp at 6400 rpm. The design of the F-2-S's manifold does not have provision for the vacuum servo brakes. Besides the normal choice of 4.10 and 4.16, there is an extra optional axle ratio, 3.9-to-1, available with this Facel Vega, which will push the factory-estimated top speed to 120 mph. /MT

CAR CLINIC *continued*

material in the battery's plates generates an electric current any time an external circuit is made with the battery.

A condenser is capable of storing electrical energy.

DYING ENGINE

I have a 1960 Dodge Dart with ram induction. It is a fine engine, but has one fault — when I put it in DRIVE, the engine goes dead. The same thing happens when I put it in REVERSE or push any other button. This is most aggravating, especially when I stop or try to park and the engine goes dead.

Please let me know if anything can be done.

H. G. Jones Danville, N.C.

Since you provided a limited number of symptoms, it is difficult to state with certainty exactly what your trouble may be. It is reasonable to assume, however, that you are attempting to idle the engine at too low an rpm. An engine fitted with two enormous four-barrel carburetors like your ram-induction Dart cannot possibly have the idle characteristics of a conservative engine, fitted with a single dual-throat carburetor. Four idle jets create a greater sensitivity to consistent idle than two. Eight butterfly valves of the two carburetors provide so much area for air to leak that only a few thousandths of an inch movement can mean a couple of hundred rpm difference in idle speed. The engine's tendency to die will be reduced manyfold if you will adjust the idle speed 100 to 150 rpm faster.

NEW IGNITION SYSTEM

A recent issue of MOTOR TREND mentioned something about a new ignition system. It says a major breakthrough is about to be announced in the field of transistor ignition systems.

Could you please tell me what this system is? How does it differ from the standard ignition systems now in use?

Fred Holbrook Sherman, Tex.

Presently available transistor ignition systems differ from conventional coil and distributor systems in that the points do not provide the coil's primary current. In a transistorized system the distributor breaker points only provide a low current to trip a transistor circuit which provides coil current. The transistor circuit is in effect a power switching system which requires a very weak impulse to control.

Since a very weak input impulse is provided to the transistor circuit, the breaker points are only called upon to pass a small fraction of the current that would be required for a conventional system. The current flow is so low that the points no longer pit from electrical erosion. The only wear factor that still must be considered is that of the fiber rubbing block.

A New Triumph-Herald

by Gordon Wilkins

A NEW TRIUMPH-HERALD sedan, called the 1200, was recently revealed, and I was able to drive the car early in order to discover what the differences were with the higher-performance engine.

The new engine, which is standard, now has a cubic-inch displacement of 70, versus the old version of 57.8. This gives a rating of 45 hp, up five hp from the former setup. The biggest increase is in torque, which means greater flexibility and better top-gear performance as compared with the previous performance capabilities. Also, the axle ratio has been reduced to 4.11 and the new transmission features closer ratios.

Road speed at 1,000 rpm in top gear is now raised to 15.7 mph, to give a 70-mph cruising speed at less than 4500 rpm. The ability to reach 35 mph or so in second gear is very useful when accelerating in town traffic, and a third gear which now gives about 55 mph is much better than before for main road overtaking.

On a quick run before announcement date, I found the whole character of the car is obviously much improved. Standard-Triumph, the manufacturer, claims it now goes from rest to 50 mph in 17 seconds, against 20 for the older version of the car and the 0-60-mph time is 27.4 against 30.4.

Taking into account the reduction in engine revolutions and the fewer gear changes required for a given performance, it does not seem unreasonable for the maker's claim that the improved performance of the 1200 is achieved without a proportionate increase in fuel consumption.

The displacement was brought up by respacing the bores in the block and increasing them to 2.728 inches. The compression ratio is 8-to-1, and carburetion is by a single downdraft unit. I understand a two-carburetor kit may later be made available through dealers, although I imagine to gain full advantage from it larger valves would also be needed. To cope with the higher heat rejection of the bigger engine, the Herald 1200 has a four-blade fan and larger-capacity radiator.

Visible changes in the new Herald are chrome strips around the front and rear glass and at the base of the rear quarter windows. The instrument panel is in polished walnut and has a lockable glove box. There also is a new hand brake. New, wider and deeper upholstered front seats are still better shaped and more comfortable. /MT

MOTOR TREND'S 1961 CAR SPECIFICATIONS

All figures listed are for four-door sedans. If that body type is not offered, data for four-door hardtops is listed. Obvious exceptions are such cars as the Thunderbird and Corvette. All specifications are the latest as announced by the manufacturers. Additions and corrections will be made each month in order that our readers may have the most complete and authoritative figures on Detroit's new cars. (Entries marked "NA" contain information not available at the time of publication.)

	LENGTH	WIDTH	HEIGHT	WHEELBASE	TREAD		TIRE SIZE	MINIMUM ROAD CLEARANCE	TURNING CIRCLE	SHIPPING WEIGHT	FRONT SEAT			REAR SEAT		
					FRONT	REAR					HEAD ROOM	LEG ROOM	HIP ROOM	HEAD ROOM	LEG ROOM	HIP ROOM
BUICK Le Sabre, Invicta	213.2	78.0	56.3	123.0	62.0	61.0	7.60 x 15	5.5	44.0	4129	34.5	44.8	63.3	34.1	41.4	63.2
Electra	219.2	78.0	57.0	126.0	62.0	61.0	8.00 x 15	5.7	45.7	4333	34.3	44.8	63.6	34.5	44.0	63.2
BUICK Special	188.4	71.3	52.8	112.1	56.0	56.0	6.50 x 13	4.9	38.1	2610	33.9	44.6	58.6	33.7	37.8	58.2
CADILLAC 60	222.0	79.8	56.6	129.5	61.0	61.0	8.00 x 15	5.1	43.0	4770	34.4	46.0	63.3	34.1	44.5	63.1
62	222.0	79.8	56.3	129.5	61.0	61.0	8.00 x 15	5.1	43.0	4680	34.4	46.0	63.3	34.1	44.5	63.1
75	242.3	80.6	59.1	149.8	61.0	61.0	8.20 x 15	6.2	48.0	5390	36.3	44.2	65.5	34.8	NA	60.1
CHEVROLET	209.3	78.4	55.5	119.0	60.3	59.3	7.50 x 14	6.0	40.8	3500	34.5	45.0	63.5	34.0	42.0	63.5
CHEVROLET CORVAIR	180.0	67.0	51.5	108.0	54.0	54.0	6.50 x 13	6.0	39.0	2355	33.5	44.0	58.5	33.5	36.5	58.0
CHEVROLET CORVETTE	176.7	70.4	52.2	102.0	57.0	59.0	6.70 x 15	6.7	37.0	2905	37.0	46.4	59.6	- - -	- - -	- - -
CHRYSLER Newport, Windsor	215.6	79.4	54.9	122.0	61.0	59.7	8.00 x 14	5.2	44.0	NA	37.6	45.1	63.8	38.1	42.4	62.8
New Yorker	219.8	79.4	55.6	126.0	61.2	60.0	8.50 x 14	5.7	46.6	NA	37.6	45.3	63.8	38.1	42.4	62.8
300-G	219.8	79.4	55.1	126.0	61.2	60.0	8.00 x 15	5.7	46.6	NA	38.1	45.6	- - -	38.1	35.4	- - -
COMET	194.8	70.4	54.5	114.0	55.0	54.5	6.00 x 13	5.9	39.9	2440	38.6	43.9	57.0	37.6	40.8	56.7
DODGE	212.5	78.7	54.9	122.0	61.5	60.2	8.00 x 14	5.3	43.9	3700	37.6	45.1	63.8	38.1	42.4	62.8
DODGE DART	209.4	78.7	54.8	118.0	61.5	60.2	7.50 x 14	5.1	42.3	3510	37.6	45.1	63.8	38.0	42.1	62.9
DODGE LANCER	188.8	72.3	53.3	106.5	56.0	55.5	6.50 x 13	5.4	37.9	2595	37.9	42.8	56.8	37.4	39.7	56.9
FORD	209.9	79.9	55.0	119.0	61.0	60.0	7.50 x 14	5.5	41.0	3683	38.2	45.3	62.1	37.6	43.3	63.5
FORD FALCON	181.2	70.3	54.5	109.5	55.0	54.5	6.00 x 13	5.9	38.3	2289	38.8	44.6	57.1	37.3	39.4	57.0
FORD THUNDERBIRD	205.0	75.9	52.5	113.0	61.0	60.0	8.00 x 14	5.2	40.2	3958	37.5	43.9	59.0	37.6	40.4	52.3
IMPERIAL	227.3	81.7	56.7	129.0	61.8	62.2	8.20 x 15	5.6	48.2	NA	38.9	46.9	61.0	38.3	42.9	60.2
LINCOLN CONTINENTAL	212.4	78.6	53.5	123.0	62.1	61.0	9.00 x 14	5.5	46.7	4771	38.6	44.0	59.7	38.2	40.0	60.7
MERCURY	214.6	79.9	55.0	120.0	61.0	60.0	7.50 x 14	5.7	41.6	3762	38.2	45.3	62.1	37.6	43.3	63.5
OLDS Dynamic 88, Super 88	212.0	77.2	55.8	123.0	61.0	61.0	8.00 x 14	5.6	43.0	4024	34.5	44.4	63.3	34.4	41.7	63.3
98	218.0	77.2	56.6	126.0	61.0	61.0	8.50 x 14	5.8	43.8	4208	35.2	44.1	63.6	34.4	41.7	63.2
OLDSMOBILE F-85	188.2	71.6	52.6	112.0	56.0	56.0	6.50 x 13	4.9	37.0	2566	34.0	44.0	58.6	33.9	37.8	58.2
PLYMOUTH	209.5	80.0	54.6	118.0	60.9	59.6	7.00 x 14	4.7	42.2	NA	33.3	45.1	63.8	33.5	42.1	62.9
PLYMOUTH VALIANT	183.7	70.4	53.3	106.5	56.0	55.5	6.50 x 13	5.4	37.1	2695	33.6	42.8	56.8	33.1	39.8	56.9
PONTIAC Catalina, Ventura	210.0	78.2	55.9	119.0	62.5	62.5	8.00 x 14	6.0	46.0	3795	38.8	45.1	63.2	37.9	40.6	63.2
Star Chief, Bonneville	217.0	78.2	55.9	123.0	62.5	62.5	8.00 x 14	6.0	46.6	3895	38.8	44.9	63.2	37.9	40.9	63.0
PONTIAC TEMPEST	189.3	72.2	53.5	112.0	56.8	56.8	6.00 x 15	6.0	41.0	2800	38.3	44.1	58.6	37.1	37.8	58.2
RAMBLER AMBASSADOR	199.0	73.6	56.9	117.0	57.8	59.1	8.00 x 14	5.5	39.8	3430	36.0	43.0	59.8	34.5	40.0	60.1
RAMBLER AMERICAN	173.0	70.0	56.2	100.0	54.6	55.0	6.00 x 15	5.3	36.0	2544	35.0	44.0	58.0	33.0	37.5	45.3
Classic V-8	189.9	72.4	57.1	108.0	58.8	59.1	7.50 x 14	5.4	37.6	3255	36.0	43.0	59.8	34.5	40.0	60.1
Classic 6	189.9	72.4	57.3	108.0	57.8	58.0	6.50 x 15	5.6	37.3	2933	36.0	43.0	59.8	34.5	40.0	60.1
STUDEBAKER HAWK	204.0	71.4	55.5	120.5	57.4	56.6	6.70 x 15	6.8	41.0	3207	34.5	44.0	59.5	33.7	37.0	58.0
STUDEBAKER LARK	175.0	71.4	56.5	108.5	57.4	56.6	6.50 x 15	6.1	37.5	2966	35.2	43.5	59.5	34.7	40.0	59.0
LARK Cruiser	179.0	71.4	56.5	113.0	57.4	56.6	6.50 x 15	6.1	39.0	3000	35.2	43.5	59.5	34.7	44.0	59.5

1961 BODY & CHASSIS DIMENSIONS

	TYPE	HORSEPOWER	TORQUE	CUBIC INCHES	BORE AND STROKE	COMPRESSION	CARBURETION	AXLE RATIOS		
								AUTOMATIC	MANUAL	OPTIONAL
BIG CARS										
BUICK Le Sabre (standard)	V-8	250 @ 4400	384 @ 2400	364	4.13 x 3.40	10.25	1 2-bbl.	3.07	---	---
Le Sabre (optional)	V-8	235 @ 4400	375 @ 2400	364	4.13 x 3.40	9.0	1 2-bbl.	3.07	---	---
Le Sabre (optional)	V-8	300 @ 4400	405 @ 2800	364	4.13 x 3.40	10.25	1 4-bbl.	3.23	---	---
Invicta, Electra, Electra 225	V-8	325 @ 4400	445 @ 2800	401	4.19 x 3.64	10.25	1 4-bbl.	3.23	---	---
CADILLAC 60, 62 & 75	V-8	325 @ 4800	430 @ 3100	390	4.00 x 3.875	10.5	1 4-bbl.	2.94	---	3.21, 3.77
CHEVROLET Six	6	135 @ 4000	217 @ 2000	235	3.56 x 3.94	8.25	1 1-bbl.	3.36	3.36	3.55, 3.70
170	V-8	170 @ 4200	275 @ 2200	283	3.87 x 3.00	8.5	1 2-bbl.	3.08, 3.36	3.36	3.70
230	V-8	230 @ 4800	300 @ 3000	283	3.87 x 3.00	9.5	1 4-bbl.	3.36	3.36	3.70
250	V-8	250 @ 4400	355 @ 2800	348	4.12 x 3.25	9.5	1 4-bbl.	3.08	3.36	3.08
280	V-8	280 @ 4800	355 @ 3200	348	4.12 x 3.25	9.5	3 2-bbl.	3.08	3.36	---
305	V-8	305 @ 5200	355 @ 3400	348	4.12 x 3.25	9.5	1 4-bbl.	3.55	3.36	---
340	V-8	340 @ 5800	362 @ 3600	348	4.12 x 3.25	11.25	1 4-bbl.	---	3.70	---
350	V-8	350 @ 6000	364 @ 3600	348	4.12 x 3.25	11.25	3 2-bbl.	---	3.70	---
360	V-8	360 @ 5800	409 @ 3600	409	4.31 x 3.50	11.25	1 4-bbl.	---	3.36	3.70, 4.11, 4.56
CHEVROLET CORVETTE 230	V-8	230 @ 4800	300 @ 3000	283	3.87 x 3.00	9.5	1 4-bbl.	3.55	3.36	3.70, 4.11, 4.56
245	V-8	245 @ 5000	300 @ 3800	283	3.87 x 3.00	9.5	2 4-bbl.	3.55	3.36	3.70, 4.11, 4.56
270	V-8	270 @ 6000	285 @ 4200	283	3.87 x 3.00	9.5	2 4-bbl.	---	3.36	3.70, 4.11, 4.56
275	V-8	275 @ 5200	305 @ 4400	283	3.87 x 3.00	11.0	F.I.	---	3.36	3.70, 4.11, 4.56
315	V-8	315 @ 6200	295 @ 5100	283	3.87 x 3.00	11.0	F.I.	---	3.36	3.70, 4.11, 4.56
CHRYSLER Newport	V-8	265 @ 4400	380 @ 2400	361	4.12 x 3.38	9.0	1 2-bbl.	2.93	3.58	---
Windsor	V-8	305 @ 4600	410 @ 2400	383	4.25 x 3.38	10.0	1 2-bbl.	2.93	3.58	---
New Yorker	V-8	350 @ 4600	470 @ 2800	413	4.18 x 3.75	10.1	1 4-bbl.	2.93	---	---
300-G	V-8	375 @ 5000	495 @ 2800	413	4.18 x 3.75	10.1	2 4-bbl.	3.23	3.23	---
DODGE Polara V-8	V-8	265 @ 4400	380 @ 2400	361	4.12 x 3.38	9.0	1 2-bbl.	2.93	3.23	3.23
D-500	V-8	325 @ 4600	425 @ 2800	383	4.25 x 3.38	10.0	1 4-bbl.	3.23	3.23	---
D-500 w/Ram Induction	V-8	330 @ 4800	460 @ 2800	383	4.25 x 3.38	10.0	2 4-bbl.	3.23	3.23	---
DODGE DART Six	6	145 @ 4000	215 @ 2800	225	3.40 x 4.125	8.2	1 1-bbl.	3.31	3.54	3.58
V-8	V-8	230 @ 4400	340 @ 2400	318	3.91 x 3.31	9.0	1 2-bbl.	3.31	3.58	3.31
V-8 Power Pack	V-8	260 @ 4400	345 @ 2800	318	3.91 x 3.31	9.0	1 4-bbl.	3.31	---	---
D-500	V-8	305 @ 4800	395 @ 3000	361	4.12 x 3.38	9.0	1 4-bbl.	3.31	NA	---
Police Special	V-8	325 @ 4600	425 @ 2800	383	4.25 x 3.38	10.0	1 4-bbl.	3.23	3.23	---
D-500 w/Ram Induction	V-8	330 @ 4800	460 @ 2800	383	4.25 x 3.38	10.0	2 4-bbl.	3.23	3.23	---
FORD Six	6	135 @ 4000	200 @ 2000	223	3.62 x 3.60	8.4	1 1-bbl.	3.56	3.56	3.89
292	V-8	175 @ 4200	279 @ 2200	292	3.75 x 3.30	8.8	1 2-bbl.	3.00	3.56	3.89
352	V-8	220 @ 4400	336 @ 2400	352	4.00 x 3.50	8.9	1 2-bbl.	3.00	3.56	3.56
390 Special	V-8	300 @ 4600	427 @ 2800	390	4.05 x 3.78	9.6	1 4-bbl.	3.00	3.56	3.56
390 Police Special	V-8	330 @ 5000	427 @ 3200	390	4.05 x 3.78	9.6	1 4-bbl.	3.00	3.56	3.89
390 Super	V-8	375 @ 6000	430 @ 3400	390	4.05 x 3.78	10.6	1 4-bbl.	NA	3.56	3.89
FORD THUNDERBIRD	V-8	300 @ 4600	427 @ 2800	390	4.05 x 3.78	9.6	1 4-bbl.	3.00	---	---
IMPERIAL	V-8	350 @ 4600	470 @ 2800	413	4.18 x 3.75	10.1	1 4-bbl.	2.93	---	---
LINCOLN CONTINENTAL	V-8	300 @ 4100	465 @ 2000	430	4.30 x 3.70	10.0	1 2-bbl.	2.89	---	---
MERCURY Six	6	135 @ 4000	200 @ 2000	223	3.62 x 3.60	8.4	1 1-bbl.	3.56	3.56	3.89
292	V-8	175 @ 4200	279 @ 2200	292	3.75 x 3.30	8.8	1 2-bbl.	3.00	3.56	3.89
352	V-8	220 @ 4400	336 @ 2400	352	4.00 x 3.50	8.8	1 2-bbl.	3.00	3.56	3.89
390	V-8	300 @ 4600	427 @ 2800	390	4.05 x 3.78	9.6	1 4-bbl.	3.00	3.56	3.89
OLDSMOBILE Dynamic 88	V-8	250 @ 4400	405 @ 2400	394	4.13 x 3.69	8.8	1 2-bbl.	2.87	3.42	---
Super 88,98	V-8	325 @ 4600	435 @ 2800	394	4.13 x 3.69	10.0	1 4-bbl.	3.08, 3.23	3.42	---
Starfire	V-8	330 @ 4600	440 @ 2800	394	4.13 x 3.69	10.25	1 4-bbl.	3.42	---	---
PLYMOUTH Six	6	145 @ 4000	215 @ 2800	225	3.40 x 4.125	8.2	1 1-bbl.	3.31	3.54	---
Fury	V-8	230 @ 4400	340 @ 2400	318	3.91 x 3.31	9.0	1 2-bbl.	2.93	3.58	---
Super Fury	V-8	260 @ 4400	345 @ 2800	318	3.91 x 3.31	9.0	1 4-bbl.	2.93	3.58	---
Golden Commando	V-8	305 @ 4800	395 @ 3300	361	4.12 x 3.38	9.0	1 4-bbl.	3.31	3.31	---
Sonoramic Commando	V-8	330 @ 4800	460 @ 2800	383	4.25 x 3.38	10.0	2 4-bbl.	3.31	3.31	---
PONTIAC Catalina, Ventura, Star Chief	V-8	215 @ 3600	390 @ 2000	389	4.06 x 3.75	8.6	1 2-bbl.	---	3.23	3.08, 3.42
Bonneville (optional other series)	V-8	235 @ 3600	402 @ 2000	389	4.06 x 3.75	8.6	1 4-bbl.	---	3.23	3.08, 3.42
Catalina, Ventura w/Hydramatic	V-8	267 @ 4200	405 @ 2400	389	4.06 x 3.75	10.25	1 2-bbl.	2.69, 2.87	---	3.08, 2.56, 2.69
Catalina, Ventura w/Hydramatic (opt)	V-8	287 @ 4400	417 @ 2400	389	4.06 x 3.75	10.25	1 4-bbl.	2.69, 2.87	---	2.56, 3.08, 2.96
Star Chief w/Hydramatic	V-8	283 @ 4400	413 @ 2800	389	4.06 x 3.75	10.25	1 2-bbl.	2.87	---	2.69, 3.08
Bonneville w/Hydramatic	V-8	303 @ 4600	425 @ 2800	389	4.06 x 3.75	10.25	1 4-bbl.	2.87	---	2.69, 3.08
All series w/Hydramatic (optional)	V-8	230 @ 4000	380 @ 2000	389	4.06 x 3.75	8.6	1 2-bbl.	2.56	---	---
All series (optional)	V-8	318 @ 4600	430 @ 3200	389	4.06 x 3.75	10.75	3 2-bbl.	2.69	3.23	2.56, 2.69, 3.08, 3.42
All series (optional)	V-8	333 @ 4800	425 @ 2800	389	4.06 x 3.75	10.75	1 4-bbl.	3.08	3.42	3.64
All series (optional)	V-8	348 @ 4800	430 @ 3200	389	4.06 x 3.75	10.75	3 2-bbl.	3.08	3.42	3.64
RAMBLER Ambassador	V-8	250 @ 4700	340 @ 2600	327	4.00 x 3.25	8.7	1 2-bbl.	2.87	3.54	3.15, 4.10
Ambassador Power Pack	V-8	270 @ 4700	360 @ 2600	327	4.00 x 3.25	9.7	1 4-bbl.	3.15	3.54	2.87, 4.10
STUDEBAKER Hawk V-8	V-8	210 @ 4500	300 @ 2800	289	3.60 x 3.60	8.8	1 2-bbl.	3.07	3.31	3.54
Hawk V-8 Power Pack	V-8	225 @ 4500	305 @ 3000	289	3.60 x 3.60	8.8	1 4-bbl.	3.07	3.31	3.54
COMPACT CARS										
BUICK SPECIAL	V-8	155 @ 4600	220 @ 2400	215	3.50 x 2.80	8.8	1 2-bbl.	3.08	3.36	---
Special	V-8	185 @ 4800	230 @ 3200	215	3.50 x 2.80	10.25	1 4-bbl.	3.36	3.36	---
CHEVROLET CORVAIR Turbo-Air	6	80 @ 4400	128 @ 2300	145	3.44 x 2.60	8.0	2 1-bbl.	3.27	3.27	3.55, 3.89
Super Turbo-Air	6	98 @ 4600	132 @ 2800	145	3.44 x 2.60	8.0	2 1-bbl.	3.27	3.27	3.55, 3.89
COMET 144	6	85 @ 4200	134 @ 2000	144	3.50 x 2.50	8.7	1 1-bbl.	3.50	3.50	3.23, 3.90
170	6	101 @ 4400	156 @ 2400	170	3.50 x 2.94	8.7	1 1-bbl.	3.50	3.20	3.23, 3.90
DODGE LANCER 170	6	101 @ 4400	155 @ 2400	170	3.40 x 3.125	8.2	1 1-bbl.	3.23	3.55	---
225	6	145 @ 4000	215 @ 2800	225	3.40 x 4.125	8.2	1 1-bbl.	3.23	3.55	---
FORD FALCON 144	6	85 @ 4200	134 @ 2000	144	3.50 x 2.50	8.7	1 1-bbl.	3.50	3.10	---
170	6	101 @ 4400	156 @ 2400	170	3.50 x 2.94	8.7	1 1-bbl.	3.50	3.20	---
OLDSMOBILE F-85	V-8	155 @ 4800	210 @ 3200	215	3.50 x 2.80	8.8	1 2-bbl.	3.23	3.07	---
F-85	V-8	185 @ 4800	230 @ 3200	215	3.50 x 2.80	10.25	1 4-bbl.	3.36	3.36	---
PLYMOUTH VALIANT	6	101 @ 4400	155 @ 2400	170	3.40 x 3.125	8.2	1 1-bbl.	3.23	3.55	3.23, 3.91
PONTIAC TEMPEST	4	110 @ 3800	190 @ 2000	194.5	4.06 x 3.75	8.6	1 1-bbl.	---	3.55	3.31, 3.73
Tempest w/Hydramatic	4	130 @ 4400	195 @ 2200	194.5	4.06 x 3.75	8.6	1 1-bbl.	3.08	---	3.55
Tempest Premium Fuel	4	120 @ 3800	202 @ 2000	194.5	4.06 x 3.75	10.25	1 1-bbl.	---	3.31	3.55
Tempest Premium Fuel w/Hydramatic	4	140 @ 4400	207 @ 2200	194.5	4.06 x 3.75	10.25	1 1-bbl.	3.08	---	3.55
Tempest w/4-bbl	4	155 @ 4800	215 @ 2800	194.5	4.06 x 3.75	10.25	1 4-bbl.	3.55	---	3.08, 3.73
Tempest V-8	V-8	155 @ 4600	220 @ 2400	215	3.50 x 2.80	8.8	1 2-bbl.	3.55	---	3.08, 3.73
RAMBLER AMERICAN Deluxe, Super	6	90 @ 3800	160 @ 1600	195	3.13 x 4.25	8.0	1 1-bbl.	3.31	3.31	3.78, 4.11
AMERICAN Custom	6	125 @ 4200	180 @ 1600	195	3.13 x 4.25	8.7	1 1-bbl.	2.87	3.31	3.78
CLASSIC Six	6	127 @ 4200	180 @ 1600	195	3.13 x 4.25	8.7	1 1-bbl.	3.31	3.78	4.11, 4.38
CLASSIC Six Power Pack	6	138 @ 4500	185 @ 1800	195	3.13 x 4.25	8.7	1 2-bbl.	3.31	3.78	4.11, 4.38
CLASSIC V-8	V-8	200 @ 4900	245 @ 2500	250	3.50 x 3.25	8.7	1 2-bbl.	3.15	4.10	3.55, 4.44
CLASSIC V-8 Power Pack	V-8	215 @ 4900	260 @ 2500	250	3.50 x 3.25	8.7	1 4-bbl.	3.15	4.10	3.55, 4.44
STUDEBAKER LARK Six	6	112 @ 4500	154 @ 2000	170	3.00 x 4.00	8.5	1 1-bbl.	3.73	3.73	3.54, 4.10, 4.56
LARK V-8	V-8	180 @ 4500	260 @ 2800	259	3.60 x 3.25	8.8	1 2-bbl.	3.07	3.07	3.31, 3.54
LARK V-8 Power Pack	V-8	195 @ 4500	265 @ 3000	259	3.60 x 3.25	8.8	1 4-bbl.	3.07	3.07	3.31, 3.54

SELL 'N' SWAP

Requirements are: copy limit of 25 words (not including name and address); 1st come, 1st served; we reserve the right to edit where necessary; we are not responsible for accuracy of description, although we will reject any misleading statements. This service is not open to commercial advertisers. No ads will be accepted if payment is not made in advance. Only one CAR may be listed in any single Sell 'N' Swap insertion. This limitation will not apply to parts, catalogs, etc. The charge is $4 per insertion. If your car is unusual and you have a photo of it suitable for publication, you may submit it with your ad. If we decide to print it there's no cost to you for the cut, but we'll have to decide which photos to use. Sorry, no photos can be returned—Editor

SELL

'47 LINCOLN CONTINENTAL, with Cadillac powerplant & Lincoln transmission with o.d. Completely rebuilt, from kingpins to new saddle-tan naugahyde interior. Mark IV air conditioning. Over $9000 invested. Only cash offers considered. F. R. Benton, Suite 248-50 Insurance Exch. Bldg., Sioux City, Iowa.

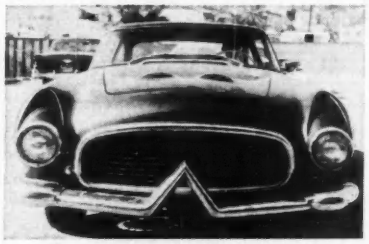
'07 REO ½-ton stake-body truck. Perfectly restored — like new. With new trailer, $2500 firm. George McLean, 511 E. Colfax, South Bend, Ind.

'27 WOLVERINE soft-top cpe., with rumble-seat. Body perf.; needs paint & top re-covered. $250. J. H. Hardesty, Rt. 1 Box 75, Lathrop, Calif.

'56 STUDEBAKER Golden Hawk in mint cond. Air conditioned, r & h, Ultramatic, power steering. Beautiful 2-tone blue — fast, clean & sporty. Bill Snodgrass, 507 W. Denton, Ennis, Tex.

'33 GRAHAM 4-dr sed., with sidemounts & luggage rack. New rings, valves, door glass. Easily restorable. Drive anywhere — '61 plates & inspection. Bill Snodgrass, 507 W. Denton, Ennis, Tex.

'56 ITALIA spt. cpe., custom-built by "Touring." All-alum. body, with '58 Corvette engine,



4-speed transmission, 30-gal. gas tank. Air conditioned. Mech. perf. Jimmy D. Jung, 441 Bernard St., Los Angeles 12, Calif.

'37 LINCOLN K 12-cyl. 4-dr. sed., with semi-collapsible top. Body, uph. & chassis in perf. cond.; engine in good cond. Recently equipped with 4 new premium ww's, tubes, battery & electric fuel pump. Chauffeur-driven; best of care. $1200. J. R. Flournoy, Flournoy Flying Service, Municipal Airport, Wichita, Kan.

'53 ALLARD K-3 conv. rdstr. with de Dion suspension. Modified for Chrysler or Cadillac. Never registered or raced; in storage since imported. Pix on request. Robert E. Leveille, Russellville Rd., Southampton, Mass. Phone Easthampton 1995.

'60 PLYMOUTH 2-dr. hdtp. Sonoramic ram-tube engine, heavy-duty Torqueflite — all factory-installed. R & h, power steering & brakes, air-conditioned. Perf.; never raced. $2500. Edward M. Vogel, Apt. 2006, 381 Broad St., Newark 4, N. J. Phone HUmboldt 3-3976.

'57 STUDEBAKER Golden Hawk. Exc. cond., orig.; 33,000 mi. Gold with white trim; loaded with supercharger, twin traction, etc. $1750. Raymond R. Sellers, P.O. Box 137, Upper Gulph Rd., Radnor, Pa.

'56 PACKARD Caribbean conv. with stick-shift. Completely reconditioned — new engine, top & paint. $3000. Edwin G. Barrese, P.O. Box 76, Somerville, Mass.

'38 BUICK cpe. Metallic gray; completely orig., in exc. shape thruout. R & h. A practical as well as unique automobile. $300. Donald Haddon, 3504 Washington, Racine, Wis. Phone MElrose 4-5967.

'29 HUDSON Super 6 big 4-dr. sed., with dual sidemounts. Exc. body & chrome, average uph. Mech. good; unusual orig. engine with 50,000 mi. $395. Art Hanford, 807 20th St., Sioux City 4, Iowa. Phone 8-4610.

60 MERCEDES-BENZ 220-SE. Maroon & white 2-tone, white leather interior; 9000 mi. $4500. Evelyn Krueger, Apt. 936, 2500 Wisconsin Ave. N.W., Washington 7, D. C.

ELECTRIC CAR with fiberglass body. 1 motor to each rear wheel — excellent performance. Also: body molds, 2 cars partially assembled & spare parts. Total price — $4000. E. H. Taliaferro, 2849 Qualtrough Rd., San Diego 6, Calif.

CADILLAC V-16 ENGINE, clutch & transmission. Runs good; only 58,000 actual mi. Also a few other parts. $1000 or best offer. Ronald Hubbartt, Rt. 1, Lancaster, Mo. Phone GL 7-3520.

KAISERS — '51 2-dr. with stick shift, '52 4-dr. with automatic shift. Also 2 '51 Kaisers for parts. Make offer. H. A. Wingate, Rt. 4, Box 264, Troy, Ala.

'35 **LAFAYETTE** 4-dr. trunk sed. All orig.; fine shape — recently repainted, new clutch, etc. Used regularly; 24,000 orig. mi. Radio works; tools, manual. Asking $450. R. Lambrecht, 334 Richlandtown Pike, Quakertown, Pa.

'30 **ROLLS-ROYCE** Phantom II GN-50, with Barker body. New engine at factory in '60. Tuscon red & black, with sterling silver trim — fabulous! $4500. John J. Schaler III, 2000 N. Meridian St., Indianapolis, Ind.

'41 **PACKARD** 160 4-dr. sed. Model 1904 — 8 cyl., long wheelbase, 6 wheels, sidemounts, standard transmission. R & h. Exc. mechanically & physically. W. Plain, 914 E. Edison, Tucson, Ariz.

CAR & TRUCK pamphlets, *Motor Trend*, *Hot Rod*, *Sports Cars Illustrated* magazines — complete issues. $15 C.O.D., plus postage. Charles F. Moeller, Fountain Square Inn, Sussex, N. J.

'38 **LA SALLE** cpe. with opera seats. Exc. cond.; rebuilt engine — will go anywhere. Orig. paint; extra tires. Restoration can be completed for about $300. Price, $1000. David L. McCann, R.D. 1, Millersville, Pa.

GENUINE "SEE-RITE" sidemount tire mirrors. Brand new — complete with heavy cast-brass bases for strap mounting. Triple chrome-plated over brass & nickel; highly polished. Special sets available for popular classics. State make of car & type wheels, $45 pr., less straps, prepaid & insured. A Ward Shanen, 2444 S. Orkney St., Philadelphia 48, Pa.

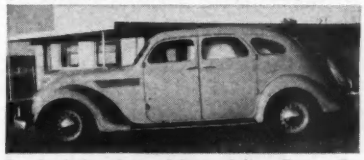
DENMAN "HANDCRAFTED" rayon & nylon custom-built "classic tires" now available for all antique, vintage, veteran, classic & special-interest cars. All sizes, from 4.40/4 50 x 21 to 7.00 x 21 wide white walls. 50c for complete listings & descriptive literature. A. Ward Shanen, 2444 S. Orkney St., Philadelphia 48, Pa.

TRIPPE SENIOR safety driving lights, 8½-in. dia; 6- & 12-volt types available. Brand-new in orig. boxes. Come complete with all wiring, brackets, fittings & 2 Gulmite wrenches. $45 pr., shipped prepaid & insured. A Ward Shanen, 2444 S. Orkney St., Philadelphia 48, Pa.

CLASSIC ILLUSTRATION—'29 Ruxton. Black on quality ivory stock. 9" x 14" — suitable for framing. 1st of series. Send $1 cash or money order. John Scoby, 6457 Charlesworth Ave., North Hollywood, Calif.

MOTOR (N.Y.) Annual Show Issues 1926-'43, classic automobile catalogs, manuals, data books. Over 1000 items in stock. Complete listing 35c. Sheldon J. Lewis, 61-33 213th St., Bayside, L.I., N.Y.

'35 **CHRYSLER** Airflow 4-dr. sed. in good con.



Good 6-ply tires; driven daily. Best offer. Charles E. Patterson, Box 496, Hays, Kan.

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SAFETY BELTS & goggles — new — Air Force surplus. Safety belt 3-in. B-11; quick-release buckle — $5.95 Goggles M-1944, individually boxed, rubber frame, wide-view clear-view lens; preferred by all racing drivers — $2.95. H. Harmelin, 7605 Essex, Chicago 49, Ill.

'36-37 **CORD SERVICE BULLETINS**. Over 200 pages, incl. complete parts list. $15. Norman M. Doyle, 10824 W. Estates Dr., Cupertino, Calif.

CLASSIC & ANTIQUE CAR Sales Catalogs: Packard, Chrysler, Lincoln, Cadillac, Pierce-Arrow, Buick, Ford (Model A & later), Orphan & Foreign cars; minimum $5 ea. Also MoToR (N.Y.) Annual Numbers. Details for large, stamped, addressed envelope. No parts for cars. A. E. Twohy, 400 N. Kenmore, Los Angeles 4, Calif.

TUCKER AUTOMOBILE factory folders, test by Tom McCahill, history of the car, sales sheets, newspaper ads, etc. Package mailed anywhere for only $1. Jerry Moore, Box 10574, Riviera Beach, Fla.

AUTOMOBILE LITERATURE — Sales catalogs, instruction books, many makes '37 thru '42; some postwar catalogs; *Motor* magazines '32 thru '47. Catalogs $2 & up. Send 10c for lists. Morton Weisbord, 10151 Babbitt Ave., Northridge, Calif.

MOTORBOOKS — British, French, German, Italian & American car handbooks & shop manuals; books on maintenance, repair, tuning, racing, rallies, antiques, classics. Catalog (500 items) 25c. Grays (Dept MT), Mail Order Motor Booksellers, Hurstpierpoint, Sussex, England.

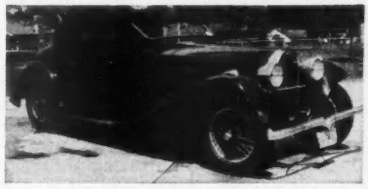
'48 **LINCOLN CONTINENTAL** hdtp. New Olds engine, 14 coats hand-rubbed lacquer, new leather interior — everything else 100% orig. & restored. Prize-winning show car cond.; everything functions perfectly. $3500. Stan Glazer, #9 Kansas Ave., Kansas City, Kan. Phone MA 1-4455.

SELL OR SWAP

'59 **LANCIA AURELIA** 2500 GT conv. with hard top, roll-up windows. White paint, black tops, gold leather interior. Stick shift, r & h. Exc. cond.; 17,000 mi. $3200 or Cadillac trade. Arthur Rubin, 1329 E. 23rd St., Brooklyn 10, N.Y. Phone DE 8-4381.

'32 **ROLLS-ROYCE** Phantom II left-hand-drive limousine. Engine o'hauled (new rings, pistons, points); new paint, tires, carpet. $3150 or Volvo & cash. Pix on serious request. Richard Baker, 614 Fisk Ave., Moberly, Mo.

'34 **BUGATTI** Type 57 cabriolet Stelvio. Dark green, with black conv. top, silver wheels. Un-



restored, but good orig. cond. $2200 — might accept modern sports car in trade. Donald R. Peterson, 112 Lawn Terrace, Minneapolis 16, Minn. Phone LI 5-4451.

'53 **JAGUAR** Mark VII sed. Dark gray, with red leather. Radio, new tires & muffler; exc. cond. $790; trade if necessary. A. D. Duff, 102 Townsend Rd., Newark, Del. Ph. EN 8-5131.

'40 **BUICK** sed. — $250. '51 Crosley station wagon — $175. Both inspected; mech perf. Crosley needs paint. Will accept old Pierce-Arrow or late station wagon trade. Philip V. Campiglia, 50-36 101st St., Corona 68, L.I., N.Y.

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'54 **WILLYS** Aero, 6-226 Series service manuals for power steering & Hydramatic transmission. Prefer to purchase; however, will rent for reproduction. Also service bulletins for passenger car. Floyd G. Wise, P.O. Box 387, Wilbur, Wash.

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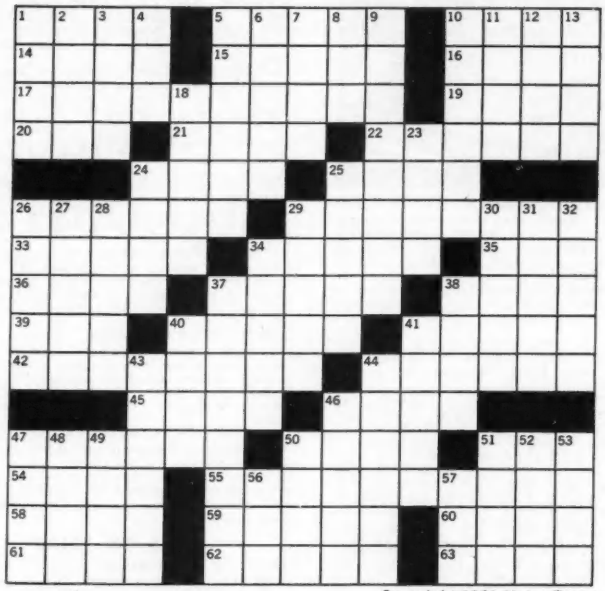
SCRIPT MOTOMETERS, radiator ornaments (mascots), fancy radiator caps, old auto catalogs, MoToR Annual Show Issues, manuals & dealers' books. Top prices paid. Sheldon J. Lewis, 61-33 213th St., Bayside, L.I., N.Y.

ORIGINAL automobile owners instruction books, sales catalogs, shop manuals — any make 1900-'25, classics '25-35. Also ALAM, ABT, NACC Handbooks. Prices & details in 1st letter, please. R. Pierce, 3517 Dollar Dr., Akron 19, Ohio.



CAR CROSSWORD

How is your knowledge of cars and the terms of the automotive world? Here is a unique way to test it. This exclusive MOTOR TREND automotive crossword puzzle has been created with the interests of our readers in mind. Naturally, not all of the words used will apply directly to cars, but a good acquaintance with the field should be the key to a quick solution of the puzzle. Correct answers will appear in next month's MT.

ACROSS

1 Small Dodge
5 De - - - - - (pl)
10 - - - - wolf
14 Antique car
15 Car's distinguishing characteristic
16 Aluminum engine is good one
17 Antique car
19 Fender bump
20 Ogle new car
21 Cheating at rally
22 Race card
24 Foreign car (sl) - - - - le
25 Angers
26 Ford compact
29 Installing Mercury dash wires
33 Where cars are displayed (pl)
34 Where race drivers try to get
35 Likewise not
36 Makes roads bad
37 Parallel to
38 Where you are
39 Precise point
40 World War I planes
41 Western hot rod
42 One across was this (pl)
44 Angled headlights
45 Entice into race
46 Memorize
47 Valiant engine is this
50 Turtle bird
51 English drivers drink
54 Two door hen house
55 Buick has two (pl)
58 Rodents
59 Pickup camper
60 Girl's name
61 Scottish Gaelic
62 Jugs
63 Sheltered

DOWN

1 Distribute
2 Sailors' hello
3 Food grain
4 Also
5 Hopped-up fireplaces
6 Hot missiles do this
7 Follow another car
8 Engine blood
9 Power often changes this ratio
10 Imperial is this
11 Delightful place
12 Lease car
13 Uses gas
18 Races
23 Engine breather
24 Lower ET
25 Detroit cars (sl)
26 Needed for aluminum engine
27 Gallery
28 Confused drag race
29 Goad into corner
30 Powerless powerplant
31 Make Volvo
32 Covet neighbor's Thunderbird
34 Often red light
37 Opening
38 To make performance sharp
40 Swapped ends on corner
41 Bad loser
43 7 seconds 0-60 mph
44 Continental kits
46 English compact
47 Big cars need this to turn in
48 Took small hill too fast
49 Plots
50 Small cars can turn on this
51 Tales told after race
52 Otherwise
53 Associate Society Automotive Engineers (ab)
56 At this time
57 For amphibious cars

LAST MONTH'S ANSWERS

A car almost impossible to criticize.

These are the words *Road & Track* uses to describe the new Peugeot 404. The magazine states that the 404 is "one of the best handling, most roadworthy compact sedans on the market." *Sports Cars Illustrated* (now *Car and Driver*) predicts that the Peugeot 404's body styling "will undoubtedly become a classic in the years to come." "Happy American owners" according to *Motor Trend* "will testify that the 403 is one of the world's most solid and dependable automobiles. They are soon to be joined by a good-size crowd who will be drawn naturally to the 404." Won't you join them at your nearby dealer's showroom soon? There are over 500 conveniently located Peugeot dealers throughout the United States, Mexico and Canada.

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